From: Assistant
To: info
Cc: Marne Cole
Subject: External Sender: Land Use Consent Lodgement at 3 Kelly Road, Cambridge
Date: Wednesday, 12 July 2023 3:54:33 pm

Hi there,

Please find attached resource consent application on behalf of Kelly Road Investments Ltd for a Land Use consent at 3 Kelly Road, Cambridge.

Included in this application is an assessment of environmental effects (AEE), the application form (Form 9), followed by the following information that can be accessed via the link below:

AEE
Appendix 1: Record of Title
Appendix 2: Building Plans 05.07.23
Appendix 3 District Plan Rules Assessment
Appendix 4: 3W Assessment
Appendix 5: Geotech Investigation Report
Appendix 6: Natural Hazards and SSR
Appendix 7: Preapplication Meeting
Appendix 8: Written Approval of 1 Kelly Road
Form 9

One Drive Link: 3 Kelly Road, Cambridge

Should you need any further information please contact Marne Cole in the first instance either by email, marnec@barker.co.nz, or phone, 022 405 1399.

Ngā mihi | Kind regards,

Dan Power
Assistant
09 375 0900
DanP@barker.co.nz

PO Box 1986,
Shortland Street, Auckland 1140
Level 4, Old South British Building,
3-13 Shortland Street, Auckland

barker.co.nz

B&A Logo

Kerikeri, Whangārei, Warkworth,
Auckland, Hamilton, Cambridge,
Tauranga, Napier, Wellington,
Christchurch, Queenstown, Wānaka

FORM 9

Resource Consent Application Form

Section 88 of the Resource Management Act 1991 (RMA). This form provides us with your contact information and details about your proposal. Please print clearly and complete all sections.

Note to Applicant:

You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

To: Name of Council that is the consent authority for this application: Select a Council

Type of resource consent being applied for:

☑ Land use ☐ Subdivision ☐ Combined land use and subdivision

Activity Status

☐ Controlled ☑ Restricted Discretionary ☐ Discretionary ☐ Non-complying ☐ I don't know

Fast Track Resource Consent

The Resource Management Act 1991 provides for land use activities that have a controlled activity status to be fast tracked through the resource consent process and processed within 10 working days of the application being lodged with Council. Your consent may be fast tracked if you tick 'yes' to the first two questions below.

1. Is this application for a controlled activity (land use consent only)? ☐ Yes ☐ No

2. Have you provided an electronic address for this service? ☐ Yes ☐ No

If you wish to opt out of the fast track process, tick here: ☐

Applicant Name

Please provide the full name of the persons, company, society or trust applying for this resource consent. If the applicant is a trust, please provide the full name/s of all trustees of that trust.

Name: Josh Te Weehi - Kelly Road Investments Ltd

V1 | 01/04/20

Applicant Contact Details

Postal Address:			
Post code:		Email:	jteweehi@gmail.com
Phone:		Mobile:	

Agent Contact Details

If you have an agent or other person acting on your behalf, please complete the details below.

Agent:	Marne Cole		
Contact:	Barker & Associates		
Postal Address:	5/47 Alpha Street, Cambridge		
Post code:		Email:	marnec@barker.co.nz
Phone:		Mobile:	022 405 1399

Location of Proposal

Please complete with as much detail as you can, so the site for your proposal is clearly identifiable. Include details such as unit number, street number, street name and town.

Property address:

3 Kelly Road, Cambridge

Legal description:

Lot 5 DPS 1176, SA1053/180

V1 | 01/04/20

Owner/Occupier of Site

Landowner's full name, phone number and address:

OR

☐ Same as applicant details

Occupiers full name, phone number and address:

OR

☐ Same as applicant details

Description of Proposal

Please provide a brief description of the proposal and the reasons why resource consent is required ie which rules in the district plan are infringed. If the space provided is insufficient, please attach additional pages.

Please see the attached application and appendices.

Other Consents

Please let us know of any other consents that you have applied for or know that you need to apply for related to this application. This includes any resource consents that may be required from a regional council under a regional plan.

☐ Other resource consents	Resource consent no. (if known)	
☐ Building consent	Building consent no. (if known)	
☐ Regional plan consent	Type of regional consent: *e.g. water discharge permit,* *water intake permit*	

National Environmental Standards (NES)*

Please let us know if you require consent under a National Environmental Standard. National Environmental Standards are regulatory documents that contain standards pertaining to certain matters eg management of contaminated land, telecommunications.

Is consent required under a NES? ☐ Yes ☑ No ☐ I don't know

Tick the following applicable NES:

- ☐ NES for Air Quality
- ☐ NES for Drinking Water
- ☐ NES for Telecommunication Services
- ☐ NES for Electricity Transmission Services
- ☐ NES for Assessing and Managing Contaminants in Soil to Protect Human Health
- ☐ NES for Plantation Forestry
- ☐ Other

* For further information about National Environmental Standards, their requirements and forms please refer to any other sheets provided with these application forms.

Assessment of Proposal

Please attach an assessment of your proposal's effects on the environment, an assessment against the relevant matters of Part 2 of the RMA and any relevant provisions of NES, regulations, national policy statement, regional policy statement, regional plan and district plan.

Please see the attached application and appendices.

Pre-application Information

We recommend that you have a pre-application discussion about your proposal with a Council planner.

Have you had a pre-application meeting with a Council planner? ☑ Yes ☐ No

Have you had any other conversations with any other Council staff? ☐ Yes ☑ No

Date of meeting: 10/08/2021

Please provide the names of Council staff you have spoken with:

Aiden K-M, Dawn Pritchard, Emma Norman, Tony Coutts

If notes of the meeting or other conversations were provided to you, please attach copies.

Have you attached any minutes/notes from the meeting? ☑ Yes ☐ No

Notification

The Resource Management Act 1991 allows applications to be notified for public submissions on request of the applicant.

Are you requesting that your application be publicly notified? ☐ Yes ☑ No

If you selected 'yes' to the above question, please attach a short summary outlining the details of your application.

Have you attached a summary? ☐ Yes ☐ No

Site Visit Requirements

☐ As landowner and with the consent of any occupiers or lessee, I am aware that Council staff or authorised consultants may visit the site which is the subject of this application, for the purposes of assessing this application, and agree to a site visit.

OR

☐ If the applicant is not the owner, I understand that Council staff or authorised consultants may visit the site, which is the subject of this application, for the purposes of assessing this application, and agree to a site visit.

Is there a locked gate or security system restricting access by Council staff?	☐ Yes	☐ No
Are there any dogs on the property?	☐ Yes	☐ No
Are there any hazards that may place a visitor at risk?	☐ Yes	☐ No

Provide details of any entry restrictions that Council staff should be aware of e.g. health and safety, organic farm etc.

Please contact the agent Marne Cole before conducting a site visit.

Draft Conditions

When a consent is granted, Council can include conditions to manage any adverse effects.

Do you wish to see draft conditions prior to Council making a decision on the application?	☑ Yes	☐ No

☐ By ticking this box, I understand that the opportunity to review the draft conditions is an act of good faith by the Council intended to assist with identifying errors before consent is granted. I further understand that Council has the right to continue processing the application if too much time is taken in the review of draft conditions. By requesting draft conditions I agree to an extension of time under section 37 of the RMA.

Signature of the applicant(s)

Please read the information below before signing the application form.

Payment of fees and charges

You must pay the charges payable to Council for this application under the RMA. Please refer to Council's Fees and Charges on its website.

By submitting this application to Council, you agree to pay the charges set out in Council's Fees and Charges relevant to the application.

Privacy information

Council requires the information you have provided on this form to process your application under the RMA. Council will hold and store the information on a pubic register. The details may also be made available to the public on the Council's website. If you would like to request access to, or correction of any details, please contact the Council.

Information checklist

The information checklist provided with this form sets out the full set of information that Council requires for your application to be considered complete. Your application may be returned as incomplete if you do not provide adequate information. Your completed application should be submitted to Council with any supplementary forms and/or guidance as provided by Council.

Correspondence and Invoices

Please let us know where to send any correspondence and invoices. Where possible any correspondence will be sent by email.

All correspondence excluding invoices sent to: ☐ Applicant or ☐ Agent

All invoices sent to: ☐ Applicant or ☐ Agent

Confirmation by the applicant

☐ I/we confirm that I/we have read and understood the information and will comply with our obligations as set out above. *A signature is not required if you submit this form electronically.*

Applicant name:	Josh Te Weehi - Kelly Road Investments Ltd	Signature:		Date:	
Applicant name:		Signature:		Date:	
Applicant name:		Signature:		Date:	

Confirmation by the agent authorised to sign on behalf of the applicant

As authorised agent for the applicant, I confirm that I have read and understood the above information and confirm that I have fully informed the applicant of their obligations in connection with this application, including for fees and other charges, and that I have the applicant's authority to sign this application on their behalf. (*A signature is not required if you submit this form electronically.)*

Agent's full name:	Marne Cole	Signature:	Marne Cole	Date:	12/07/23

Information Checklist for Resource Consent Application

All applications must include the following information:

☐ A description of the activity

☐ A description of the site where the activity will occur

☐ The full name and address of each owner or occupier of the site

☐ A description of any other activities that are part of the proposal to which this application relates

☐ A description of any other resource consent required for the proposal to which the application relates

☐ An assessment of the proposed activity's effects on the environment

☐ An assessment of the activity against Part 2 of the Resource Management Act 1991. This will need to address section 5 'Purpose', section 6 'Matters of national importance', section 7 'Other matters' and section 8 "Treaty of Waitangi'

☐ An assessment of the activity against any relevant objectives, policies or rules in the district plan

☐ An assessment of the activity against any relevant requirements, condition or permissions in any rules in a document listed in section 104(1)(b) of the RMA

☐ Record of title(s) for the subject site

This must be less than 3 months old. Please attach the title(s) and any consent notices, covenants, easements attached to the title(s)

☐ Site plan or scheme plan

Please provide at an appropriate scale (for example 1:100) showing the location of the building or activity in relation to all site boundaries. The site plan should include the following where relevant:

- North point
- Title or Reference No.
- Scale
- Date the plans were drawn
- Topographical information
- Natural features, including protected trees, indigenous vegetation, water courses
- Archaeological and/or cultural/heritage sites
- Record of Title boundaries/location of fence positions relative to boundaries
- Accessways and road frontages, including proposed crossing places/right of ways
- Onsite manoeuvring and existing and proposed car parking spaces
- Legal and physical roads
- Existing buildings
- Existing wells and/or effluent disposal systems
- Buildings on adjacent sites
- Layout and location of proposed buildings and activities in relation to legal site boundaries
- Earthworks design and contours/areas of excavation
- Landscaping
- Site coverage calculation
- Details of any signage (sign design, dimensions and location on buildings)
- Areas subject to hazards e.g. unstable slopes, areas of flooding, peat soils or fill
- Areas of potential or confirmed contamination

☐ Elevation plans

Please provide at an appropriate scale (for example 1:50, 1:100 or 1:200) and show all structures to be constructed or altered, showing the relationship and appearance of proposed buildings.

☐ Floor plans of proposed building or buildings to be used for the activity

Please clearly show the use of each area/buildings

☐ Engineering design plans for any water, wastewater and stormwater works

(Only concept engineering plans are required at this stage.)

☐ An assessment of the activity against any relevant provisions of a:

- National Environmental Standard
- National Policy Statement
- Regional Policy Statement
- Regional Plan

☐ A description of any part of the activity that is permitted under the district plan

☐ If a permitted activity is part of the proposal to which the application relates, a description of the permitted activity that demonstrates it complies with the relevant requirements and conditions for that permitted activity (so that resource consent not required for that activity).

☐ An assessment of effects (AEE) of the activity

An AEE is an essential part of your application. If an AEE is not provided Council is unlikely to accept your application. The AEE should discuss all the actual and potential effects of your proposed activity on the environment. Schedule 4 of the RMA outlines all of the matters that must be addressed in your AEE. The amount of detail provided must reflect the scale and significance of the effects that the activity may have on the environment. For example, if there are major effects arising from the proposal, a detailed analysis and discussion of these effects must be included in the AEE. It may require the provision of information from specific experts (eg a traffic engineer). If the effects of the proposal are minor, then a less detailed AEE can be submitted. (*The Council has information available to assist you to prepare the AEE – please contact us if you have any questions.)*

All applications for subdivision consent must also include the following information:

☐ The position of all new boundaries

☐ A north arrow and the scale (1:2000)

☐ All proposed and existing easements (including private easements)

☐ Any amalgamations

☐ Stages (if proposed)

☐ Dimensions and sizes of existing and proposed new lots

☐ Legal and physical roads, accessways and rights of way including grades (if applicable)

☐ All existing buildings and structures, their distance to existing and proposed boundaries and the position of any eaves in relation to rights of way/accessways

☐ The areas of all new allotments, unless the subdivision involves a cross lease, company lease, or unit plan

☐ The locations and areas of new reserves to be created, including any esplanade reserves and esplanade strips

☐ The locations and areas of any existing esplanade reserves, esplanade strips, and access strips

☐ The locations and areas of any part of the bed of a river or lake to be vested in a territorial authority under section 237A

☐ The locations and areas of any land within the coastal marine area (which is to become part of the common marine and coastal area under section 237A)

☐ The locations and areas of land to be set aside as new roads

Other useful information

The following examples of information are not compulsory, but they will be useful in helping Council make an informed decision about your application. Submitting this information *if it is relevant to your proposal* may save time and costs further down the track.

☐ Locality plan or aerial photo

Please provide at an appropriate scale (for example 1:500). Please indicate the location of the site in relation to roads and other landmarks. Show the street number of the subject site and those of adjoining sites.

☐ Volume of any earthworks

This must include area and volume of soil removed/imported and depth of cut/fill

☐ Details of Hazardous Activities and Industries (HAIL) List activity

If you are unsure whether your site is on the HAIL list please contact Council for assistance

☐ Any written approvals including details of those sought but not obtained

Please include any signed written approval forms and signed plans if acquired.

☐ Specialist reports to support your application

This may include traffic impact studies, landscape and planting plans, acoustic design certificates etc.

☐ Details and outcome of any consultation undertaken with adjacent land owners and occupiers, and relevant bodies. For example, the Regional Council, Heritage New Zealand Pouhere Taonga, Transpower, KiwiRail, NZTA, Department of Conservation etc.

☐ Details of any consultation undertaken with iwi

If you are unsure whether your proposal may affect matters of interest to iwi, or who the relevant iwi groups might be, please discuss this with Council prior to lodging your application

☐ Any other information arising from specific district plan provisions

Other information to include in an application for subdivision consent if it is relevant to your proposal

Proposal details

☐ Site coverage calculations

☐ Existing and proposed crossing places and sight distances and separation distances between crossing places

☐ Building platforms for all allotments including shape factors

☐ Onsite manoeuvring and existing and proposed vehicle parking spaces (where required)

Network utility operations

☐ Existing high voltage electricity lines and gas lines

☐ Location of existing and proposed service connections (including connections to reticulated services) and/or systems ie water, wastewater, stormwater and any easements

☐ Onsite effluent treatment and disposal areas and fields

Natural features

☐ Significant trees, bush stands, protected trees (including their extent of their dripline), covenanted areas or other features

☐ Water bodies

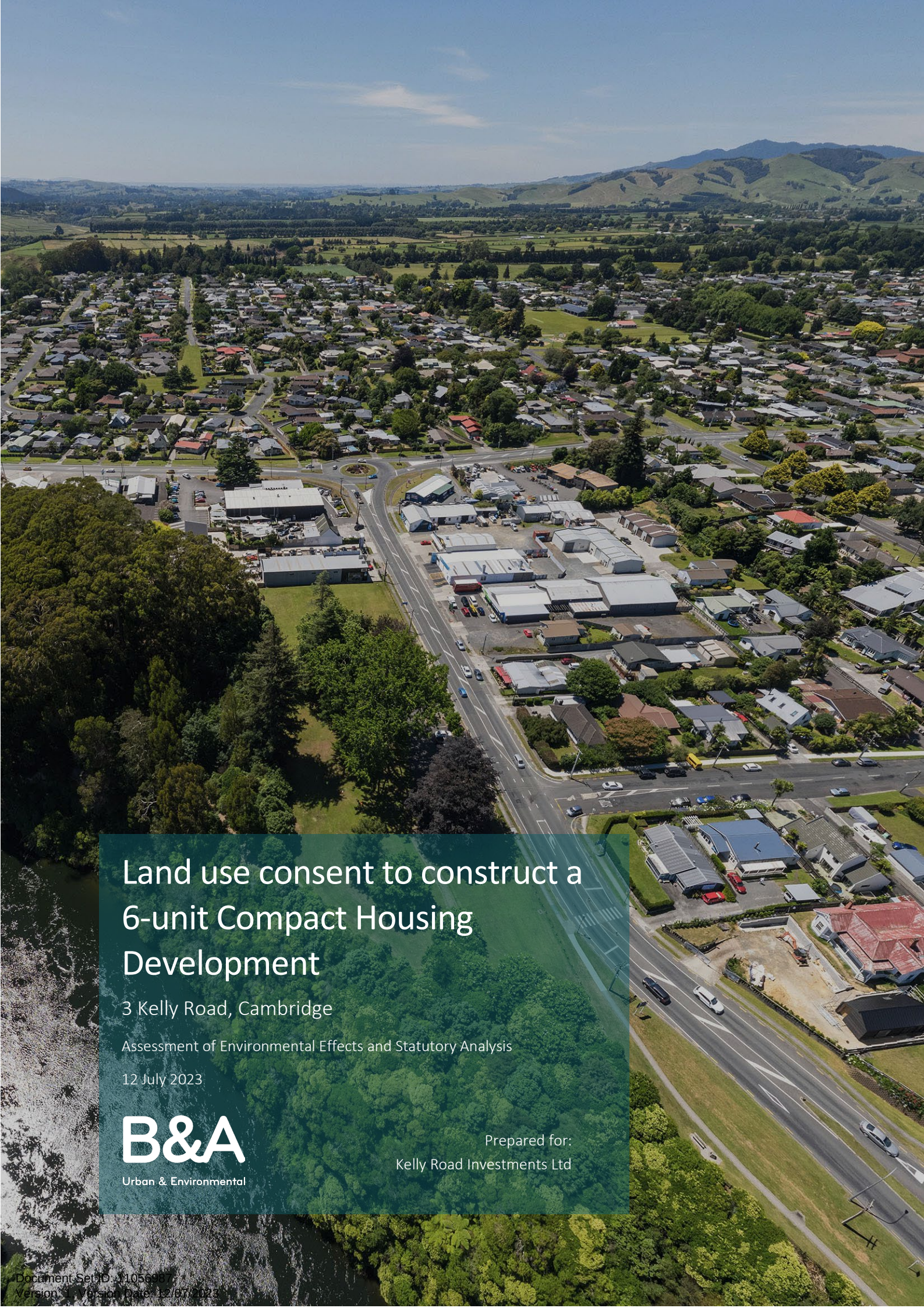
Heritage

☐ Archaeological and/or cultural heritage sites

Hazards

☐ Areas of likely or confirmed contamination

- ☐ Areas subject to land hazards e.g. unstoppable slopes, areas of flooding, peat soils, fill
- ☐ Details of proposed stormwater management appropriate to the scale and nature of the subdivision
- ☐ Pipework and onsite stormwater systems
- ☐ Open drains (including ownership)
- ☐ Effect of subdivision and end use on existing overland flow paths
- ☐ Contours showing existing and finished ground level (levels to the relevant datum) at 0.5m intervals within the subdivision, and at 2 metre intervals on adjoining properties (to enable effects on those properties to be assessed). A separate plan may be needed to show these details.
- ☐ Areas of proposed or existing fill or excavation
- ☐ Any proposed retaining walls or embankments (note if retaining wall over 1m is proposed, a typical cross section is required.)
- ☐ In urban areas, details of the percentage of proposed and existing impermeable and permeable areas
- ☐ Natural hazards, e.g. unstable slopes, areas of flooding, ponding, peat soils
- ☐ Elevations (to scale) of buildings which are affected by the location of new boundaries (e.g. where height in relation to boundary rules apply)



Land use consent to construct a 6-unit Compact Housing Development

3 Kelly Road, Cambridge

Assessment of Environmental Effects and Statutory Analysis

12 July 2023

B&A
Urban & Environmental

Prepared for:
Kelly Road Investments Ltd

B&A Reference:

18657

Status:

Final

Date:

12 July 2023

Prepared by:

Marne Cole

Planner, Barker & Associates Limited

Reviewed by:

Gareth Moran

Senior Associate, Barker & Associates Limited

Contents

Appendices

1.0 Applicant and Property Details

To:	Waipa District Council
Site Address:	3 Kelly Road, Cambridge
Applicant Name:	Kelly Road Investments Ltd
Address for Service:	Barker & Associates Ltd 2/298 Victoria Street Hamilton 3204 Attention: Marne Cole
Legal Description:	Lot 5 DPS 1176 (refer to Record of Title as **Appendix 1**)
Site Area:	1021m^2
Site Owner:	Kelly Road Investments Ltd
District Plan:	Waipa District Plan
District Plan Zoning:	Residential Zone
District Plan Overlays & Controls:	Cambridge C2 Structure Plan Area, Poor Soakage
Locality Diagram:	Refer to Figure 1.
Brief Description of Proposal:	Landuse consent to construct compact housing development comprising of six units in the Residential Zone at 3 Kelly Road.
Summary of Reasons for Consent:	Resource consent required as a **Restricted Discretionary activity.**

2.0 Summary

This report has been prepared in support of a resource consent application on behalf of Kelly Road Investments Limited for a land-use consent to create a housing development consisting of a 6-unit development under the 'compact housing' provisions of the Waipa District Plan (District Plan), at 3 Kelly Road, Cambridge.

The site is zoned Residential Zone under the provisions of the Waipa District Plan and the landuse components of this application have been assessed as a **Restricted Discretionary Activity.**

Section 2 – Residential Zone

- **2.5.1.3(b) For compact housing within the C1 and C2/C3 Structure Plan areas, non-compliance with any of the performance standards in Section 2.4.2 shall retain Restricted Discretionary Activity status (and this rule prevails over any rule to the contrary).**
- **Rule 2.4.2.8 Building length shall be 23m.** The building line is 55.69m long and is stepped in to a minimum of 2.1m (shortfall of 0.3m).
- **Rule 2.4.2.13 Impermeable Surfaces maximum 60%.** Impermeability across the entire site equates to 79%.
- **Rule 2.4.2.24 Roof pitch in C1/2/3 to be no less than 30 degrees.** The roofline has a pitch of 25 degrees at the lowest.
- **Rule 2.4.2.44 Compact housing:**

  (e) Minimum OLA 30m^2. The proposed units have 28.5m^2 OLA each.

  (f) Minimum 30% permeable surface. The proposal maintains 21% permeable surface.

  (g) Communal service courts shall be provided. Individual service courts are provided.

As detailed in Activity Status Table 2.5.1.3(b) for compact housing within the C1 and C2/C3 Structure Plan areas, non-compliance with any of the performance standards in Section 2.4.2 shall retain Restricted Discretionary Activity status (and this rule prevails over any rule to the contrary). This development meets the definition of compact housing, and therefore retains the Restricted Discretionary status despite non-compliances.

This Assessment of Environmental Effects (AEE) has been prepared in accordance with the requirements of Section 88 and Schedule 4 of the Resource Management Act 1991 (the Act) and is intended to provide the information necessary for a full understanding of the activity for which consent is sought and any actual or potential effects the proposal may have on the environment.

3.0 Site Context

3.1 Site Description

The subject site (site) is located on the eastern side of Kelly Road. The site is comprised within one Record of Title, Lot 5 DPS 1176 and has a total area of 1021m^2. An aerial photograph of the site is identified in Figure 1 (below). The site is a long rectangular shape extending away from Kelly Road

and is situated in the Residential Zone and Cambridge C2 Structure Plan Area (Figure 2). One dwelling and accessory building currently occupy the site which will be removed to accommodate the proposed development.

Figure 1: Locality plan

Figure 2: Locality plan

3.2 Surrounding Locality

The surrounding area is predominantly residential, becoming increasingly built up as the C2 & C3 growth cells develop through various stages. The site itself is situated in the south eastern portion of the C2 cell, to the south across Cambridge Road is the C3 cell. To the east is the Cambridge town belt and associated sports.

Directly adjoining the site to the north and west are other Kelly Road residential properties, to the south is Kelly Road Lodge, and to the southeast is the newly developed Cambridge Road commercial precinct which includes a large medical centre, supermarket, café, gym, and offices.

3.3 Cambridge C2 Structure Plan

The site falls within the Cambridge C2 Structure Plan Area, as visible in Figure 2 above. The subject site is within the 'Existing Residential' overlay.

4.0 Proposal

The proposal is for a land use consent under the provisions of a 'compact housing' development (by virtue of the associated District Plan definition) to construct six dwellings at 3 Kelly Road, Cambridge. The proposal involves the removal of all existing buildings onsite and the construction of a 6-unit development and associated parking and manoeuvring areas.

The site qualifies for compact housing given the site is located within the C2 Growth Cell and in close proximity to the Cambridge Green Belt, large open spaces and the compact housing overlay, there is strong policy support in the District Plan for development of this nature. Resource consent has therefore been applied for on this basis. A summary of the key elements is set out below. More detailed descriptions on particular aspects of the proposal are set out in the specialists reports and plans accompanying the application.

4.1 Built Form

The existing dwelling and accessory buildings onsite will be removed to accommodate a two-storey, six-unit residential development. Demolition of existing buildings is a permitted activity and therefore can be anticipated in the zone.

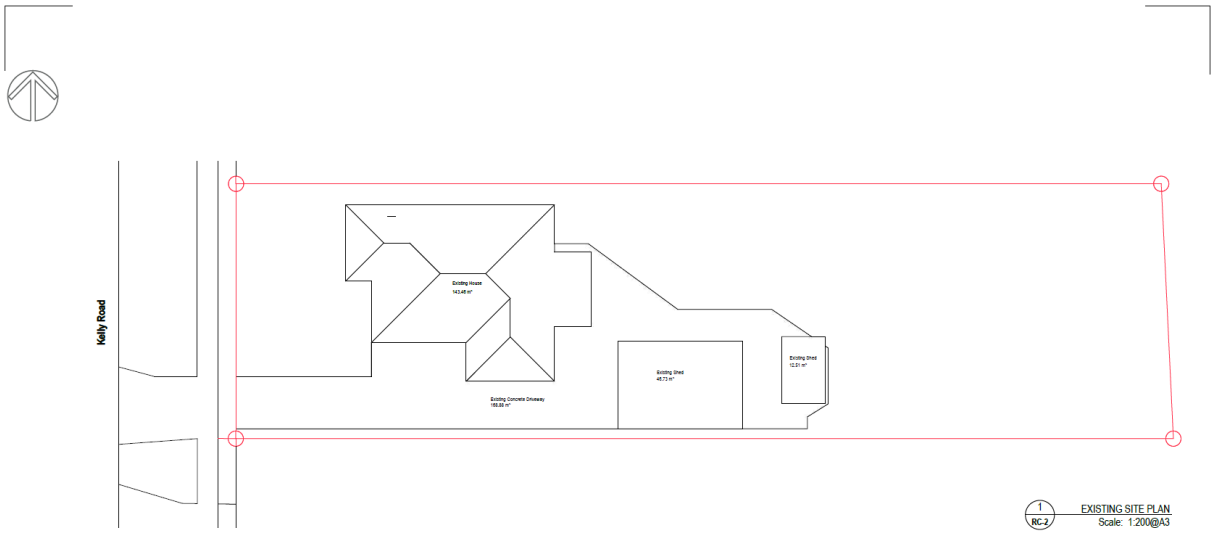


Figure 3: Existing site plan (and demolition plan)

Each unit contains a single car internal garage, a bathroom, kitchen, living, dining and laundry area on the ground floor, with three bedrooms (including one ensuite), an office and a second bathroom on the first floor. Each unit has a Gross Floor Area (GFA) of 139.28m^2 to 139.36m^2, with a total site coverage of 446.36m^2/43.76%. Each unit is provided with 28.46m^2 of north facing outdoor living space, easily accessible from the main living area on the ground floor.

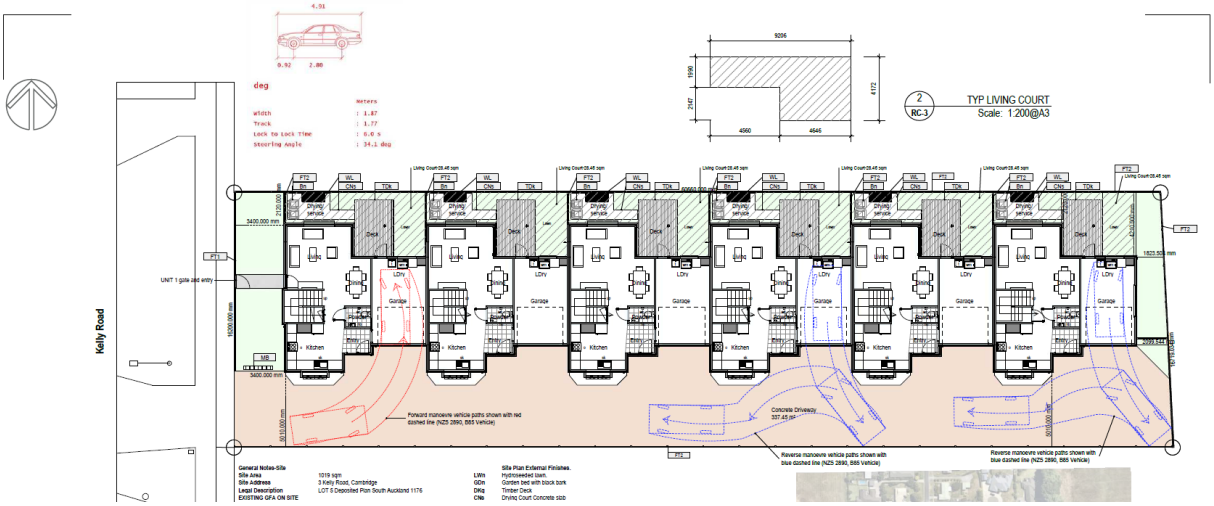


Figure 4: Floor plan showing parking & manoeuvring

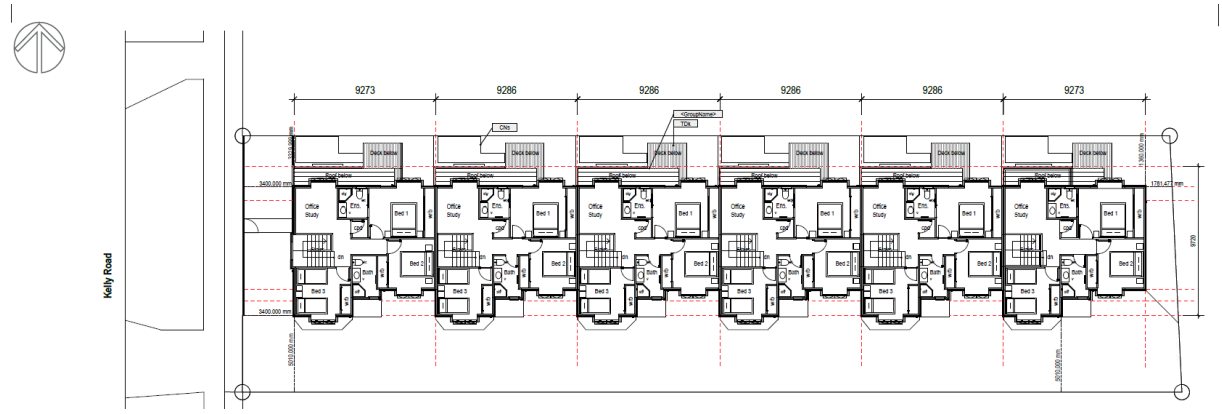


Figure 5: First floor plan

The dwellings are proposed to be clad with a mix of materials, including brick veneer, timber cladding, metal cladding and panel garage doors. The building façade has stepping and changes in depth along the north, south and western boundaries to provide visual interest and to break up the long building length.

Figure 6: First floor plan

Unit 1 provides access from the internal access way and an additional pedestrian access from the road. The unit has a total of 29.38% glazing adjoining the road from both storeys, providing ample passive surveillance.

Although the plans show the dwellings broken down into Units, the applicants are not proposing the subdivide the dwellings. The Units are shown to demonstrate to Council that suitable access, outdoor living, permeability/impermeability across the site has a whole.

4.1.1 Landscaping

The proposal creates an overall impermeable surface area of 803.38m^2 (216.9m^2 permeable), being 79% impermeable surface.

The proposed landscaping includes grassed lawn, two types of fencing, pear trees, magnolia trees, hedging and ground cover grasses and shrubs. Regarding hard landscaping, the vehicle access will be concrete and the decks are timber.

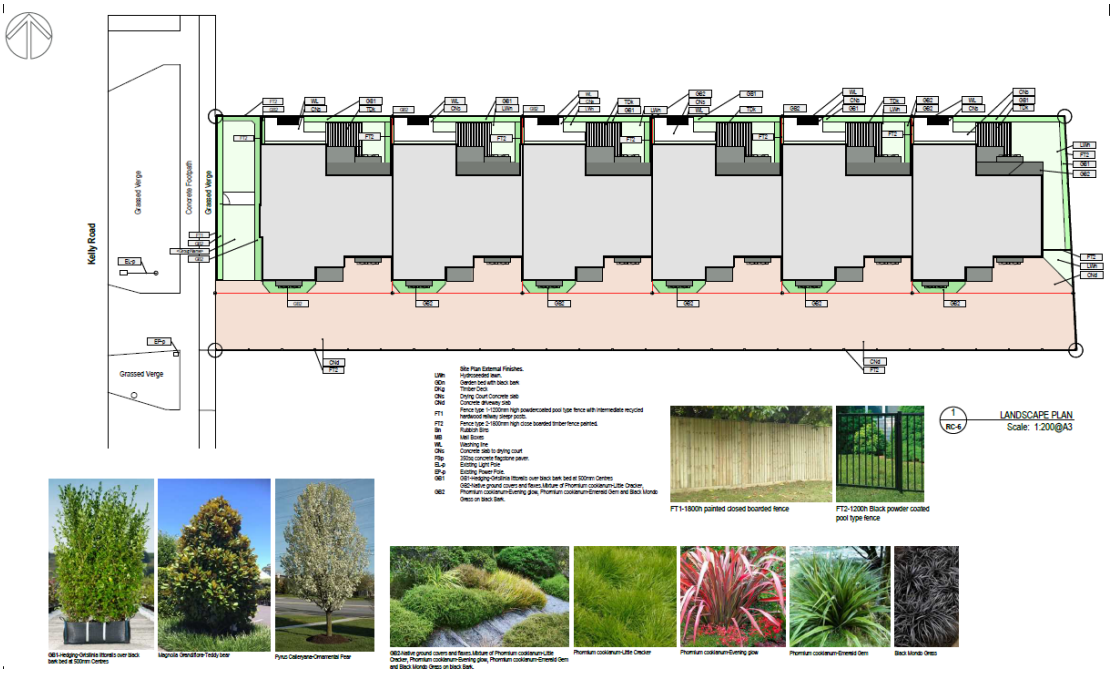


Figure 7: Proposed landscaping

4.1.2 Servicing

All servicing reports being; Natural Hazards Assessment Report, Geotechnical Assessment Report, and 3 Waters Assessment Report have been prepared by GDC Consultant engineers.

The site will utilise the existing crossing, upgraded to form a shared access traversing down the southern edge of the site and connecting with Kelly Road. Onsite parking for one car per dwelling and manoeuvring have been provided to ensure all vehicles are able to exit onto Kelly Road in a forward manner.

No significant earthworks, noise and vibration are proposed, preparation for the building platform and other works will fall under the permitted level.

According to Flood Hazard information provided by Waikato Regional Council, the property is not within a Waikato Regional Council managed flood protection or land drainage area, and there is no local scale flood hazard mapping for the property, and thus no flood level information. The property is also not within the regional scale flood hazard area.

In addition, according to GDC's Geotech report, subsoil is mostly comprised of silty sand with no ground water found in the 3m deep boreholes and Landcare Research S-Map data on soil type in Appendix E described that soil type is referred to as allophanic with a good loam topsoil and no reference to recent alluvial deposition in the description, meaning that this area is not vulnerable to liquefaction hazard.

A Three Waters Assessment has been prepared by GDC Consultants and is attached as **Appendix 4.** The development is proposed to be serviced as follows:

4.1.3 Water

The existing dwelling has a water connection from the water mains along Kelly Road and new connection will be required for the new units. However, a detailed design will be required at the building consent stage to accommodate all the requirements. Based on the services map prepared by Waipa District Council. The fire hydrant is located 52.2m North of the property.

4.1.4 Wastewater

The existing 100m diameter connection will be upgraded to 150mm and extended to the rear of the lot to serve the units. Each unit will individually connect to the 150mm line via 100mm connections. Refer to section 4.0 of the Three Waters Assessment contained in **Appendix 4**.

4.1.5 Stormwater

All stormwater will be disposed of onsite. All units will have individual underground soakage systems positioned within the accessway and runoff from the accessway will be discharged to the soakage trench. The final positions of the soakage systems are to be determined at building consent stage. Refer to section 3.0 and Appendix H of the Three Waters Assessment.

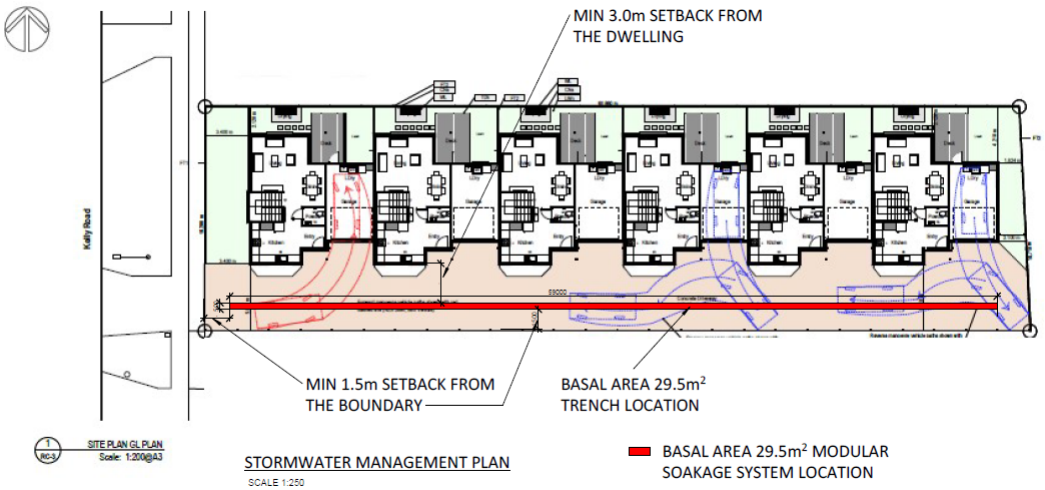


Figure 8: Proposed stormwater soakage.

5.0 Reasons for Consent

A rules assessment against the provisions of the Waipa District Plan ('District Plan') is attached as **Appendix 3.** The site is zoned Residential and falls within the C2 Structure Plan Area. The proposal requires consent for the matters outlined below.

As per the District Plan definitions, Compact Housing is:

"'Compact housing' means a housing DEVELOPMENT in which the design of BUILDINGS, their layout, access and relationship to one another has been planned in a comprehensive manner to achieve compatibility between all BUILDINGS on a SITE or SITES. This can include Papakāinga

housing, terraces, duplexes, apartments and town houses, but excludes RETIREMENT VILLAGE ACCOMMODATION AND ASSOCIATED CARE FACILITIES."

There is no minimum dwelling/unit associated to the definition of Compact Housing. Following on from this, the activity status tables in Section 2 state:

"Compact housing seven or more dwellings per site located within the compact housing overlay identified on the Planning Maps, or as provided for in Rule 2.4.1.3(c), or within the following areas of the C1 and C2/C3 Structure Plan areas:

(i) Within 200m of an active recreation open space, the Town Belt, a neighbourhood centre or a school; or

(ii) Within 100m of a local centre or local open space; or

(iii) Within a 'compact housing' overlay identified within the structure plan maps.

For compact housing within the C1 and C2/C3 Structure Plan areas, non-compliance with any of the performance standards in Section 2.4.2 shall retain Restricted Discretionary Activity status (and this rule prevails over any rule to the contrary)."

Therefore, as the site at 3 Kelly Road is within the C2 Structure Plan, 75m from the Town Belt, 75m from open space, and adjoins a local centre (being the café, supermarket, medical centre and offices built on 1913 Cambridge Road), we have assessed the application as a Restricted Discretionary compact housing development. The matters of discretion are restricted to the following:

- Building location, bulk and design; and
- Landscaping; and
- Location of parking areas and vehicle manoeuvring; and
- CPTED; and
- Traffic generation and connectivity; and
- Noise; and
- Stormwater disposal; and
- Alignment with any relevant Urban Design Guidelines approved by Council

5.1 Waipa District Plan

For comparative purposes, we have also assessed the proposal against the Residential Zone provisions below.

Section 2 – Residential Zone

- 2.5.1.3(b) For compact housing within the C1 and C2/C3 Structure Plan areas, non-compliance with any of the performance standards in Section 2.4.2 shall retain Restricted Discretionary Activity status (and this rule prevails over any rule to the contrary).
- Rule 2.4.2.8 Building length shall be 23m. The building line is 55.69m long and is stepped in to a minimum of 2.1m (shortfall of 0.3m).

- **Rule 2.4.2.13 Impermeable Surfaces maximum 60%.** Impermeability across the entire site equates to 79%.
- **Rule 2.4.2.24 Roof pitch in C1/2/3 to be no less than 30 degrees.** The roofline has a pitch of 25 degrees at the lowest.
- **Rule 2.4.2.44 Compact housing:**

  (e) Minimum OLA 30m². The proposed units have 28.5m² OLA each.

  (f) Minimum 30% permeable surface. The proposal maintains 21% permeable surface.

5.2 Activity Status

Overall, this application is for a **Restricted Discretionary Activity.**

6.0 Public Notification Assessment (Sections 95A, 95C and 95D)

6.1 Assessment of Steps 1 to 4 (Sections 95A)

Section 95A specifies the steps the council is to follow to determine whether an application is to be publicly notified. These are addressed in statutory order below.

6.1.1 Step 1: Mandatory public notification is required in certain circumstances

Step 1 requires public notification where this is requested by the applicant; or the application is made jointly with an application to exchange of recreation reserved land under section 15AA of the Reserves Act 1977.

The above does not apply to the proposal.

6.1.2 Step 2: If not required by step 1, public notification precluded in certain circumstances.

Step 2 describes that public notification is precluded where all applicable rules and national environmental standards preclude public notification; or where the application is for a controlled activity; or a restricted discretionary, discretionary or non-complying boundary activity.

In this case, the applicable rules do not preclude public notification, and the proposal is not a controlled activity or boundary activity. Therefore, public notification is not precluded.

6.1.3 Step 3: If not required by step 2, public notification required in certain circumstances.

Step 3 describes that where public notification is not precluded by step 2, it is required if the applicable rules or national environmental standards require public notification, or if the activity is likely to have adverse effects on the environment that are more than minor.

As noted under step 2 above, public notification is not precluded, and an assessment in accordance with section 95A is required, which is set out in the sections below. As described below, it is considered that any adverse effects will be no more than minor.

6.1.4 Step 4: Public notification in special circumstances

If an application is not required to be publicly notified as a result of any of the previous steps, then the council is required to determine whether special circumstances exist that warrant it being publicly notified.

Special circumstances are those that are:

- Exceptional or unusual, but something less than extraordinary; or
- Outside of the common run of applications of this nature; or
- Circumstances which make notification desirable, notwithstanding the conclusion that the adverse effects will be no more than minor.

It is considered that there is nothing noteworthy about the proposal. It is therefore considered that the application cannot be described as being out of the ordinary or giving rise to special circumstances.

6.2 Section 95D Statutory Matters

In determining whether to publicly notify an application, section 95D specifies a council must decide whether an activity will have, or is likely to have, adverse effects on the environment that are more than minor.

In determining whether adverse effects are more than minor:

- Adverse effects on persons who own or occupy the land within which the activity will occur, or any land adjacent to that land, must be disregarded.

  The land to be excluded from the assessment is listed in section 6.3 below.

- Adverse effects permitted by a rule in a plan or national environmental standard (the 'permitted baseline') may be disregarded.

  In this case there is no relevant permitted baseline to consider for a residential activity of this nature in the Residential Zone.

- Trade competition must be disregarded.

  This is not considered to be a relevant matter in this case.

- The adverse effects on those persons who have provided their written approval must be disregarded.

  No written approvals have been obtained, for the current proposal, but written approval was obtained from 1 Kelly Road for a previous iteration of the development.

The sections below set out an assessment in accordance with section 95D, including identification of adjacent properties, and an assessment of adverse effects.

6.3 Land Excluded from the Assessment

In terms of the tests for public notification (but not for the purposes of limited notification or service of notice), the adjacent properties to be excluded from the assessment are shown in **Figure** below, and include:

- 1, 5, 7 and 9 Kelly Road;
- 2a and 8 Kelly Road; and
- 1905 and 1907 Cambridge Road.

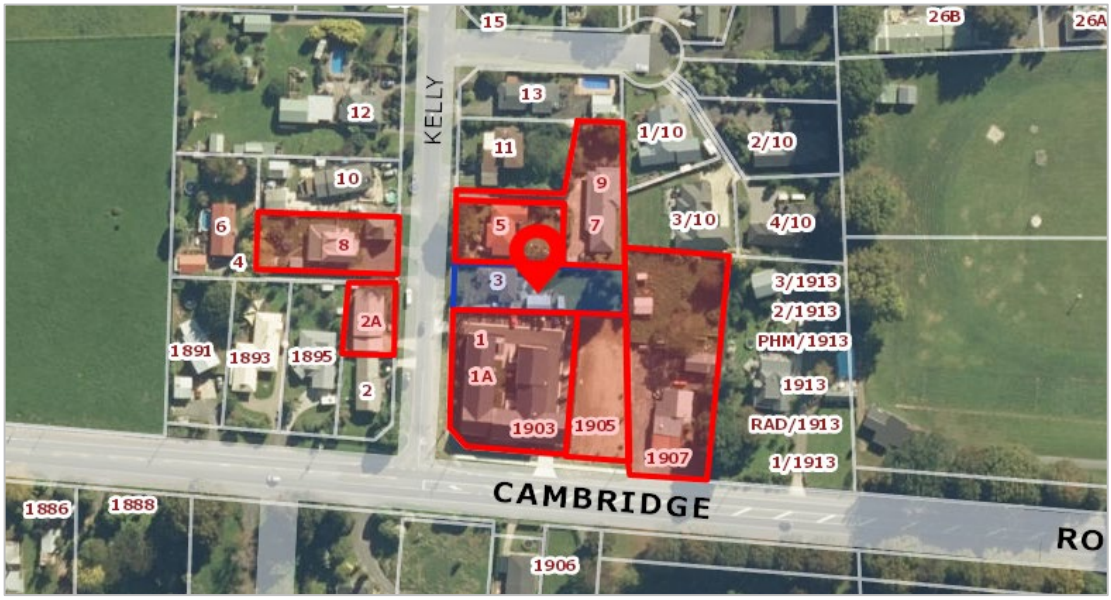


Figure 9: Adjacent properties in relation to subject site. Source: Emaps.

6.4 Assessment of Effects on the Wider Environment

The following sections set out an assessment of wider effects of the proposal, and it is considered that effects in relation to the following matters are relevant:

- Character and amenity;
- Transportation;
- Earthworks and construction; and
- Servicing and infrastructure.

These matters are set out and discussed below.

6.4.1 Character and Amenity

The Act defines amenity values as "*those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes".* As such the amenity values of an area can be described as those special attributes, relating particularly to natural and physical characteristics that make an area or

neighbourhood unique. Therefore, it is important to consider the effects that development may have on the various characteristics that contribute to the amenity and character of the receiving environment.

In particular to this application, it is important to note the proposed density of the proposal and the alignment to the Compact Housing provisions of the District Plan. The location of this site, being 75m from the town belt and open space, adjoining a commercial centre, and located very near the Compact Housing Overlay shown on Council Planning Maps and the C1/2/3 Land Use Plans (Appendix S19 of the District Plan), indicates that the District Plan anticipates higher density developments in this area. Due to this, the site has all of the qualifying location and meets the definition requirements to be a Restricted Discretionary compact housing development (as per Rule 2.4.1.3).

6.4.1.1 Density

The proposed unit sizes range from 117m^2 to 160m^2, each accommodating open plan, three-bedroom, single garage dwellings with outdoor living areas, servicing areas and landscaping. The dwellings comply with internal boundary setback provisions, height in relation to boundary provisions and provides fencing and a comprehensive landscaping plan to increase the amenity of the site. Although no subdivision is proposed, the dwellings have been divided into units to demonstrate aspects of the district plan such as site coverage, impermeable surface, outdoor living spaces, service areas, etc.

When compared to the receiving environment and the types of building being developed as part of the growth cells and around the town belt, the proposed building and the associated density of the site is consistent with the receiving environment. As mentioned above, the proximity to the town belt (75m birds eye or 200m on foot), commercial centres such as the one newly built at 1913 Cambridge Road, and the proximity to the Growth Cell Compact Housing Overlays. As the site does not meet the 2000m^2 minimum, it can be expected that six dwellings (versus seven) are an appropriate density for an undersized lot.

The nature and density of the development is consistent with the expectations of the area, which provides for compact housing. Due to the existing low-density nature of Kelly Road, the units will set new precedent for the street, however, as mentioned above, compact housing is anticipated in the District Plan in this area. The density is mitigated by the proximity to the town belt and open spaces provided for in the growth cells and retirement villages, providing relief from the proposed density.

Additionally, due to the depth of the site, the bulk of the proposal will not be apparent from the road due to being stacked directly behind Unit 1 and the proposed landscaping. The development will also not be visible from Cambridge Road as it will be obscured by the Kelly Road Motel and the gym/supermarket complex at 1913.

All density standards associated with compact housing rule 2.4.2.44 are complied with in this proposal, except for permeability and OLA's which are 1.5m^2 smaller than required for 3-bedroom dwellings. It is considered the 1.5m^2 reduction in OLA's is an inconsequential reduction of space, and when coupled with spacious open plan indoor living spaces, the on-site amenity of residents is not compromised. Especially to the occupiers of Unit 1 and 6 which have additional space to the boundary.

It is also noted that all boundary setbacks, height in relation to boundary (HIRB), building height and building layout standards are maintained in this proposal and are within the permitted baseline.

With regard to the exceedances relating to site coverage and impermeable surface, much of the impermeable surface exceedance is due to the vehicle access to service access and manoeuvring to the dwellings. These exceedances are mitigated by the landscaping along the road boundary and across the site, and the majority of the bulk of the building is obscured by being rear lots/dwellings.

6.4.1.2 Building design

Directly adjoining properties such as 1 Kelly Road and 1913 Cambridge Road have building lengths exceeding 40m, the medical centre is 70m long. There are also retirement villages across Cambridge Road with significant building lengths. One of the limiting factors of the subject site is the narrow width, being only 16.5m wide while being 61m deep, therefore a long building length is unable to be avoided due to the limitations of width. However, this is a positive with regard to building bulk and the amenity of the road, as 5 of 6 dwellings are to the rear and will not be directly apparent from the road. This terraced typology can also be reasonably expected from a Residential Zone, especially areas with applicable Compact Housing overlays.

To break up the façade and length of the building, both the façade and roofline are repeatably stepped on all facades except the rear/eastern boundary. The stepping breaks up each dwelling and provides a visual interest to onlookers, it elevates the building design so the units integrate with the site and receiving environment. It would be clear from onlookers that the building is six separate dwellings, versus cookie cutter terrace designs which provide no visual interest and a poor design outcome.

The building also has a range of cladding and materials used, including brick, metal cladding, timber cladding, and a mix of roofing, joinery and pipes. This adds to the visual interest and the elevating quality of the homes, which is consistent with the surrounding area including the new builds in the growth cell. This is carried across the site with the use of soft landscaping, hard surfaces, and fencing. Overall, due to the high-quality architectural design of the building, the proposed building is not an eyesore that will negatively impact the amenity of the built environment.

To mitigate the overall density of the site, the applicants are proposing a mix of landscaping along the road boundary, including permeable fencing, hedging and a considerable amount of glazing (29.38%) and pedestrian access facing the road. This provides considerable passive surveillance to Kelly Road and is consistent with CPTED guidelines. There is also considerable glazing on both the northern and southern facades, adding to the perceived surveillance and the neighbourly feel of the building.

To enable compliance with daylight recession plane, the roof pitch was reduced to 25 degrees. Overall, a minor non-compliance to achieve adequate sunlight into adjoining properties. The gable roof still maintains an ample pitch that is in keeping with the rest of Kelly Road, such as the existing house on the site or sites to the north. Having a lower roof pitch also reduces the height of the building and therefore the perceived dominance of the building.

Overall, the adverse effects on the wider environment with regard to the character and amenity will be less than minor.

6.4.2 Transportation

Traffic and the effects on the roading network are an instrumental part of the District Plan direction to ensure an integrated approach to landuse and transport. At a local scale, the integration of new activities needs to ensure that the roading network can continue to function in a safe and efficient manner.

The creation of five additional units (above what currently exists onsite) will ultimately result in the subsequent additional traffic movements accessing Kelly Road. Given the surrounding and wider environment is already significantly residentially developed along with a mixture of commercial activities, any vehicle movements associated with the activity are an anticipated outcome in the environment. Furthermore, the vehicle movements do not exceed what has been anticipated by virtue of District Plan provisions.

The proposal utilises the existing access on the site, each unit is provided with one internal carpark and onsite manoeuvring has been provided within the access allowing vehicles to exit the site in a forward manner. The access is relatively short and straight, allowing vehicles to clearly see others (including pedestrians and cyclists) to avoid potential conflict.

Overall, we conclude that any additional traffic movements that may result from the approval of this resource consent will have a no more than minor effect on the wider environment.

6.4.3 Earthworks and Construction

There undoubtably will be some temporary impact on the surrounding amenity during the construction stage of the proposal, specifically in relation to the increased traffic movements and noise generated by construction vehicles. However, these potential effects are part and parcel of residential development and will only be temporary in nature. Furthermore, given the low scale of the proposal and flat topography of the site only minimal earthworks will be required.

All works associated with earthworks and the construction of the dwellings, will be within the permitted standards of the District Plan.

6.4.4 Servicing and Infrastructure

The servicing to the C2 growth cell and Kelly Road includes reticulated water (including a nearby fire hydrant) and wastewater. As per the provisions in the District Plan, stormwater in the C2 growth cell currently require stormwater management onsite, which is provided in this application. Detailed stormwater management and associated plans are included in **Appendix 4** which has demonstrated to show that stormwater can be appropriately managed on site. Therefore, effects on the environment are less than minor.

6.5 Summary of Effects

Overall, it is considered that any adverse effects on the environment relating to this proposal will be minor.

6.6 Public Notification Conclusion

Having undertaken the section 95A public notification tests, the following conclusions are reached:

- Under step 1, public notification is not mandatory;

- Under step 2, public notification is not precluded;
- Under step 3, public notification is not required as it is considered that the activity will result in minor adverse effects; and
- Under step 4, there are no special circumstances.

Therefore, based on the conclusions reached under steps 3 and 4, it is recommended that this application be processed without public notification.

7.0 Limited Notification Assessment (Sections 95B, 95E to 95G)

7.1 Assessment of Steps 1 to 4 (Sections 95B)

If the application is not publicly notified under section 95A, the council must follow the steps set out in section 95B to determine whether to limited notify the application. These steps are addressed in the statutory order below.

7.1.1 Step 1: Certain affected protected customary rights groups must be notified

Step 1 requires limited notification where there are any affected protected customary rights groups or customary marine title groups; or affected persons under a statutory acknowledgement affecting the land.

The above does not apply to this proposal.

7.1.2 Step 1: Certain affected protected customary rights groups must be notified

Step 2 describes that limited notification is precluded where all applicable rules and national environmental standards preclude limited notification; or the application is for a controlled activity (other than the subdivision of land).

In this case, the applicable rules do not preclude limited notification and the proposal is not a controlled activity. Therefore, limited notification is not precluded.

7.1.3 Step 3: If not precluded by step 2, certain other affected persons must be notified

Step 3 requires that, where limited notification is not precluded under step 2 above, a determination must be made as to whether any of the following persons are affected persons:

- In the case of a boundary activity, an owner of an allotment with an infringed boundary;
- In the case of any other activity, a person affected in accordance with s95E.

The application is not for a boundary activity, and therefore an assessment in accordance with section 95E is required and is set out below.

Overall, it is considered that any adverse effects on persons will be less than minor, and accordingly, that no persons are adversely affected.

7.1.4 Step 4: Further notification in special circumstances

In addition to the findings of the previous steps, the council is also required to determine whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined as eligible for limited notification.

In this instance, having regard to the assessment in section 6.1.4 above, it is considered that special circumstances do not apply.

7.2 Section 95E Statutory Matters

If the application is not publicly notified, a council must decide if there are any affected persons and give limited notification to those persons. A person is affected if the effects of the activity on that person are minor or more than minor (but not less than minor).

In deciding who is an affected person under section 95E:

- Adverse effects permitted by a rule in a plan or national environmental standard (the 'permitted baseline') may be disregarded;
- Only those effects that relate to a matter of control or discretion can be considered (in the case of controlled or restricted discretionary activities); and
- The adverse effects on those persons who have provided their written approval must be disregarded.

These matters were addressed in section 6.2 above.

Having regard to the above provisions, an assessment is provided below.

7.3 Assessment of Effects on Persons

Adverse effects in relation to character and amenity, transportation and earthworks and construction on persons are considered below.

Wider effects, such as character and amenity, transportation, earthworks and construction and cultural were considered in section 6.4 above, and considered to be minor.

7.3.1 1 Kelly Road

1 Kelly Road is the Kelly Road Lodge which contains a 22-unit motel complex, including single units and 2-bedroom apartments, carparks, and other amenities. The owner at 1 Kelly Road have provided their written approval for a previous iteration of the development to occur, which included significant height in relation to boundary non-compliances, and almost the same building footprint.

An updated written approval was not sought from the property a second time, because it has been demonstrated that they have no issues with the proposal. However, since the sign off does not directly correlate with this current proposal, an assessment has been undertaken regardless.

Refer to **Appendix 8** for a copy of the written approvals.

Figure 10: Signed written approval showing building footprint and HIRB.

The boundary shared between 1 Kelly Road and the subject site is the access and parking locations for both sites. The Lodge maintains a 8m setback from the shared boundary, coupled with the 4m building setback of the proposed dwellings, results in a significant distance between the two buildings with no high amenity space in between.

There are no direct non-compliances associated to the shared boundary of the site, all boundary setbacks, HIRB, glazing and fencing is maintained. No balconies are provided for on the dwellings so only the glazed areas would face each other, maintaining privacy and perceived dominance.

As there are no permanent residents at this site, the expectations of a commercial property to an adjoining residential property would be lesser in terms of character, amenity, traffic and overall density.

Therefore, effects on this property are less than minor.

7.3.2 Persons at 2A and 8 Kelly Road

Both of these properties are situated directly east of the site on the opposite side of Kelly Road and are occupied by residential dwellings.

The rectangular shape of the site extending in an east-west direction limits the visibility of the entire development when viewed from opposite the site. The proposed building has been designed to minimise adverse effects on adjoining properties and to integrate with the character of the residential environment. The building incorporates architectural modulation and avoids continuous flat or blank façades, while also complying with road and internal setbacks and height recession planes, ensuring the building will not 'over intensify' the site.

As such, the owners and occupiers of the above-mentioned properties would essentially have the same visual outlook from their properties despite the proposed density infringement, as the full depth and bulk of the building will not be visible from within their property boundaries.

The proposal utilises an existing vehicle crossing off Kelly Road which will be upgraded to form a shared accessway. As previously mentioned, the proposal will generate additional vehicle movements above what currently occurs onsite. However, these are associated with a residential activity in a residential environment and will not produce further adverse effects over and above what has been anticipated by virtue of District Plan provisions.

I conclude that any potential effects associated with the proposal on the properties at 2A and 8 Kelly Road will be less than minor.

7.3.3 Persons at 5, 7 and 9 Kelly Road

The above-mentioned properties are situated on adjoining sites towards the north and are occupied by residential dwellings.

It is acknowledged that this proposal introduces new, modern housing typologies to the environment that are of a higher density, which the site is capable of accommodating the proposed increased density without creating an over dominant visual appearance when viewed from adjoining properties. Given the recent changes in national direction attributed to housing densities, in our opinion developments of this nature are going to become more and more apparent in the future. Especially in places such as growth cells and nearby open space and new developments.

As discussed previously in this report, the location and locality of these sites to nearby greenbelts, open space, commercial centres, Cambridge's three biggest growth cells, and compact housing overlays, the residents at 5, 7 and 9 Kelly Road should expect the surrounding area to become higher density. The 'old' Kelly Road was a rurally zoned area, resulting in the development currently seen along the street. However, the recent rezoning made it publicly known that the area was due to change. On this basis adjoining landowners should be of the expectation that development at the proposed density will represent an anticipated outcome in the area.

The shared boundary with these properties and the subject site maintains all boundary setbacks, and adjoins the OLA's for the proposed dwellings. The façade of the building is stepped and contains a number of materials, so the sites adjoining would not see once huge blank wall with windows. It is also noted that the shared boundary between the subject site and the neighbouring sites is primarily used for access, car parking, garaging and garden storage of number 5. Similarly

for number 7 of which the driveway, car park, garden shed and washing line adjoin the subject site. These are low-amenity utility spaces that are not typically spaces that are enjoyed by residents, and therefore will not be subject to amenity effects from the proposal.

Figure 11: View of the proposed dwellings from 5 and 7 Kelly Road.

It is also noted that since the proposed dwellings are to the south of these properties, the proposal will not generate any additional shading effects would couldn't already be established by way of a permitted activity.

Reflecting on the urban design comments from Mr Foster in Section 2 of this report, the applicants removed the first-floor balconies overlooking these properties, further maintaining the sense on privacy and amenity.

Overall, adverse effects on these properties are less than minor.

7.3.4 Persons at 1905 and 1907 Kelly Road

The above-mentioned properties have all been recently developed and are occupied by commercial premises, or are proposed to be occupied by commercial premises in the near future. As such, the potential adverse effects on these properties are different to that of a standard residential property. Furthermore, these properties all front towards Cambridge Road and outlook towards the south as opposed to north at the proposed development.

The building is positioned approximately 4m from the southern boundary, ensuring there is no additional loss of privacy, shading or sunlight on the above-mentioned properties.

As such, it can be concluded that any adverse effects on the properties at 1903, 1905 and 1907 Kelly Road generated from the proposal will be less than minor.

7.3.5 Summary of Effects

Taking the above into account, it is considered that any adverse effects on persons at the aforementioned properties will be less than minor in relation to character and amenity,

transportation and earthworks and construction effects. Wider effects, were assessed in section 6.4 above and are considered to be minor.

It is considered, therefore, that there are no adversely affected persons in relation to this proposal.

7.4 Limited Notification Conclusion

Having undertaken the section 95B limited notification tests, the following conclusions are reached:

- Under step 1, limited notification is not mandatory;
- Under step 2, limited notification is not precluded;
- Under step 3, limited notification is not required as it is considered that the activity will not result in any adversely affected persons; and
- Under step 4, there are no special circumstances.

Therefore, it is recommended that this application be processed without limited notification.

8.0 Consideration of Applications (Section 104)

8.1 Statutory Matters

Subject to Part 2 of the Act, when considering an application for resource consent and any submissions received, a council must, in accordance with section 104(1) of the Act have regard to:

- Any actual and potential effects on the environment of allowing the activity;
- Any relevant provisions of a national environmental standard, other regulations, national policy statement, a New Zealand coastal policy statement, a regional policy statement or proposed regional policy statement; a plan or proposed plan; and
- Any other matter a council considers relevant and reasonably necessary to determine the application.

9.0 Effects on the Environment (Section 104(1)(A))

Having regard to the actual and potential effects on the environment of the activity resulting from the proposal, it was concluded in the assessment above that any adverse effects relating to the proposal will be less than minor and that no persons would be adversely affected by the proposal.

Section 104 also gives the Planner the opportunity to identify any potential positive effects attributed to the development. Given the current housing shortage in the Waikato region, the creation of five additional dwelling represents a positive outcome for the site, and the wider area. Based on past Council experience plus conversations with real estate agents and other prominent professionals in the property sector we are able to ascertain that the demand for smaller low maintenance sections are becoming highly sought after as a number of people simply don't have the disposable time available to care for a large section. As such this development provides

somewhat of a compromise in terms of a smaller lot size, which is further enhanced by its accessibility to numerous amenities located within the surrounding environment.

Overall, it is considered that when taking into account the positive effects, any actual and potential adverse effects on the environment of allowing the activity are acceptable.

10.0 District Plan and Statutory Documents (Section 104(1)(B))

10.1 Objectives and Policies of the Waipa District Plan

10.1.1 Section 2 – Residential Zone

OBJECTIVES	POLICIES
Key elements of residential character ***2.3.1*** *To maintain and enhance the existing elements of the Residential Zone that give each town its own character.*	***Cambridge*** ***2.3.1.1*** *To maintain and enhance Cambridge's character by:* *(a) Maintaining the grid layout that provides long vistas down roads; and* *(b) Providing for wide grassed road verges that enable sufficient space for mature trees; and* *(c) Maximising opportunities to provide public access to the town belt; and* *(d) Maintaining and enhancing public views to the Waikato River and Karāpiro Stream Valley with development actively facing and providing access to the River and the Stream; and* *(e) Providing for development that is of a low density, one to two storeys, and set back from road frontages to enable sufficient open space for the planting of trees and private gardens; and* *(f) Maintaining the mix of villa, cottage and bungalow type housing within the identified character clusters*
Neighbourhood amenity and safety ***2.3.2*** *To maintain amenity values and enhance safety in the Residential Zone*	***Building setback: road boundary*** ***2.3.2.1*** *All boundaries shall be designed and setback from roads in a manner which:* *(a) Maintains the predominant building setback within the neighbourhood except in relation to infill housing areas and Neighbourhood and Local Centres; and* *(b) Allows sufficient space for the establishment of gardens and mature trees on the site except in infill housing areas; and* *(c) Accentuates the dwelling on the site; and* *(d) Provides for passive surveillance to roads and avoids windowless walls to the street.*
	Building setback: side boundaries ***2.3.2.3*** *To maintain spaciousness when viewed from the road, provide opportunities for planting, provide a degree of privacy, maintain sunlight and daylight, provide ongoing access to the rear of the site and enable building*

	maintenance from within the site by maintaining a consistent setback between buildings on different sites.
	Height of buildings ***2.3.2.5*** *The height of new buildings shall not be out of character with the Residential Zone. For developments within the infill housing area identified on the Planning Maps this policy applies at the boundary of the site.*
	Site coverage and permeable surfaces ***2.3.2.6****To ensure that all sites have sufficient open space to provide for landscaping, outdoor activities, storage, on-site stormwater disposal, parking, and vehicle manoeuvring by maintaining a* *maximum site coverage requirement for buildings in the Residential Zone.* ***2.3.2.7*** *Maintain a proportion of each site in permeable surfaces such as lawn and gardens, in order to ensure there is sufficient capacity to enable the on-site disposal of stormwater.*
	Maintaining low ambient noise environment ***2.3.2.9*** *To ensure that noise emissions and vibration from all activities, including construction, are consistent with the low ambient noise environment anticipated in the Residential Zone.*
	Safety and Design ***2.3.2.19*** *To enhance the safety of residential neighbourhoods through site layouts and building designs that incorporate Crime Prevention through Environmental Design (CPTED) principles.* ***2.3.2.20*** *To ensure that passive surveillance is provided to roads, reserves and walkways.*
On-site amenity values ***2.3.3*** *To maintain and enhance amenity values within and around dwellings and sites in the Residential Zone through the location, layout and design of dwellings and buildings.*	***Daylight*** ***2.3.3.3*** *To maintain adequate daylight and enable opportunities for passive solar gain by providing for the progressive reduction in the height of buildings the closer they are located to a boundary (except a road boundary).*

Comment

The proposal has been assessed as a restricted discretionary activity due to the C2 compact housing rule, however, the proposal is largely compliant with the residential zone bulk and location standards, generating only impermeable surface building length infringements. The above objective and policies promote well-designed compact housing developments in that have a comprehensive design that is consideration to adjoining sites. Although the building is not a widely common housing typology throughout Cambridge, the scale and nature of the activity is an anticipated outcome in the residential zone in close proximity to reserves and commercial areas and will maintain if not enhance the existing character and amenity of the residential environment on Kelly Road. Unit 1 is front facing and has clear-glazed windows from habitable rooms looking outwards to the street, promoting passive surveillance.

Policy 2.3.1.1e is key to our proposal as it explicitly provides for *'two storey'* housing, further reiterating that although this development is the first of its kind along Kelly Road, the District Plan

has anticipated developments of this scale to arise throughout Cambridge. It is noted that the proposal is unable to achieve the required 4m front setback (infringement of 1m), however, there is ample space for landscaping to be planted within the setback to improve residential amenity and reduce potential dominance effects. All potential shading is within the permitted HIRB standards.

All of the dwellings and their associated units can demonstrate that each dwelling has suitable access, parking, manoeuvring, OLA's and on-site stormwater disposal. 21% of the site is landscaped, and most of this exceedance is due to the access covering the southern boundary of the site. More landscaping would have been included if these were not size limitations on the site, being only 16m wide and having to provide a 4m access leg.

It can be concluded that the proposal is consistent with the above-mentioned objectives and policies of the residential zone.

OBJECTIVE	POLICY
Provide housing options ***2.3.4*** *To enable a wide range of housing options in Cambridge, Te Awamutu, Kihikihi, and Karāpiro in a way that is consistent with the key elements of the character of each place*	***2.3.4.1*** *To meet changing housing needs and to reduce demand for further land to be rezoned, by providing for a range of housing options. Developments that are comprehensively designed where spaces can be shared will be preferred.*
	Compact housing ***2.3.4.5*** *To enable compact housing in the following locations:* *(a) Areas identified for compact housing on the Planning Maps or on an approved structure plan; or* *(b) Where the intensive use is off-set by adjoining an area zoned for reserve purposes on the Planning Maps that is greater than 1000m², including the Cambridge town belt; or* *(c) Within a 400m radius of a Commercial Zone.* *(d) Compact Housing will be supported where it is consistent with compact housing provided on neighbouring land.* *Provided that:* *(i) In all cases compact housing shall be comprehensively designed and shall incorporate the sustainable design and layout principles (refer to Section 21 – Assessment Criteria and Information Requirements); and* *(ii) At the boundaries of the site, compact housing shall be consistent with the predominant height and bulk of development in the neighbourhood; and* *(iii) Sites which adjoin a cul-de-sac should be avoided*
	Comprehensive design of compact housing ***2.3.5.1*** *To ensure that in-fill housing, compact housing, retirement village accommodation and associated care facilities, rest homes and visitor accommodation are comprehensively designed by:* *(a) Ensuring that developments effectively relate to the street, existing buildings, and adjoining developments in the neighbourhood; and* *(b) Ensuring that in the Cambridge Residential Character Area new dwellings between existing dwellings on the site and the road shall be avoided; and*

	(c) Avoiding long continuous lengths of wall; and *(d) Maximising the potential for passive solar gain; and* *(e) Providing for sufficient private space for the reasonable recreation, service and storage needs of residents; and* *(f) Retaining existing trees and landscaping within the development where this is practical; and* *(g) Where appropriate provide for multi-modal transport options and provide for links with existing road, pedestrian and cycleways; and* *(h) Incorporating CPTED principles; and* *(i) Addressing reverse sensitivity effects; and* *(j) Mitigating adverse effects related to traffic generation, access, noise, vibration, and light spill; and* *(k) Being appropriately serviced and co-ordinated with infrastructure provision and integrated with the transport network.*
	Cambridge Park and C1 and C2/C3 Structure Plan Area ***2.3.5.2*** *To encourage creative and innovative approaches to urban design and development within the Cambridge Park Residential Zone and the C1 and C2/C3 Structure Plan Area.*

Comment

Based on aerial photographs of Cambridge the majority of sections within the Residential Zone are in excess of 1000m^2. At this size, the town is currently unable to supply a wide range of housing options as per the directive outlined within Objective 2.3.4. This development will alleviate some of this pressure by providing a more compact residential development at a density not readily available in Cambridge, promoting a variety of different living alternatives and housing typologies.

With regard to providing well-designed compact housing developments, these dwellings have been designed to maximise functionality and amenity in a limited space. The dwellings provide ample north-facing outdoor and indoor living spaces to maximise sunlight into the homes, while service areas, parking and landscaping provide functional amenities for residents. A larger boundary setback and the proposed landscaping give additional relief to the proposed density, relating to Kelly Road more as it is still currently a low-density residential street. The road-facing dwelling provides over 28% glazing and includes a front door with direct access to Kelly Road. This increases connectivity with the street and provides direct sightlines and passive surveillance to the street.

On this basis, we are able to conclude that the proposal aligns with the above-referenced objectives and policies.

10.2 Objectives and Policies of the Waikato Regional Policy Statement and Regional Plan

10.2.1 Waikato Regional Policy Statement

The relevant provisions of the Operative and Proposed Waikato Regional Policy Statements have been given effect to within the context of the District Plan, to which we have concluded that the proposal is not contrary to the policy framework of the District Plan. On this basis we conclude that the proposal is not contrary to the overarching policy framework of the RPS.

10.2.2 Waikato Regional Plan

No consents are required under the Waikato Regional Plan.

10.3 Summary

It is considered that the proposed development is generally in accordance with the objectives and policies of the Waikato Regional Policy Statement and Regional Plan.

11.0 Part 2 Matters

Section 5 of Part 2 identifies the purpose of the RMA as being the sustainable management of natural and physical resources. This means managing the use, development and protection of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being and health and safety while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

Section 6 of the Act sets out a number of matters of national importance including (but not limited to) the protection of outstanding natural features and landscapes and historic heritage from inappropriate subdivision, use and development.

Section 7 identifies a number of "other matters" to be given particular regard by Council and includes (but is not limited to) Kaitiakitanga, the efficient use of natural and physical resources, the maintenance and enhancement of amenity values, and maintenance and enhancement of the quality of the environment.

Section 8 requires Council to take into account the principles of the Treaty of Waitangi.

Overall, as the effects of the proposal are considered to be less than minor, and the proposal accords with the relevant District Plan objectives and policies, it is considered that the proposal will not offend against the general resource management principles set out in Part 2 of the Act.

12.0 Other Matters (Section 104(1)(C))

12.1 Record of Title Interests

There are no relevant interests registered on the title which may stop this proposal from proceeding.

13.0 Conclusion

The proposal involves the construction of a 6-unit compact housing development in the Residential Zone at 3 Kelly Road, Cambridge.

Based on the above report it is considered that:

- Public notification is not required as adverse effects in relation to character and amenity, transportation, earthworks and construction and cultural are considered to be minor.
- Limited notification is not required as adverse effects on adjoining properties are able to be appropriately mitigated;
- The proposal represents an acceptable environmental outcome in the wider Cambridge environment;
- The proposal accords with the relevant Waipa District Plan objectives and policies; and
- The proposal is considered to be consistent with Part 2 of the Act.

It is therefore concluded that the proposal satisfies all matters the consent authority is required to assess, and that it can be granted on a non-notified basis.

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**SA1053/180**
Land Registration District	**South Auckland**
Date Issued	06 October 1952

Prior References
SA694/357

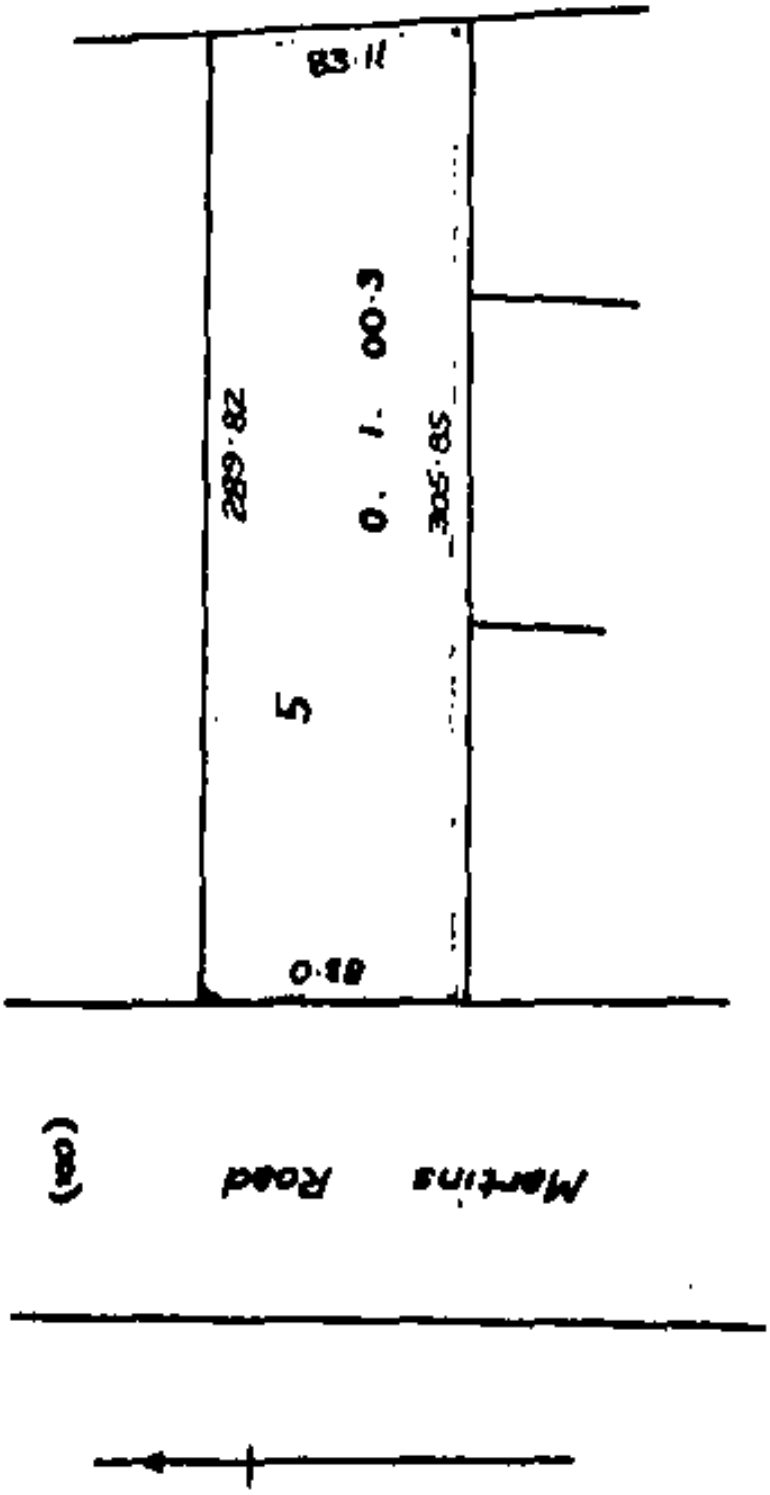
Estate	Fee Simple
Area	1019 square metres more or less
Legal Description	Lot 5 Deposited Plan South Auckland 1176
Registered Owners	

Kelly Road Investments Limited

Interests

Fencing Agreement in Transfer S39614 - 6.10.1952

12028199.3 Mortgage to Kiwibank Limited - 25.2.2021 at 3:47 pm

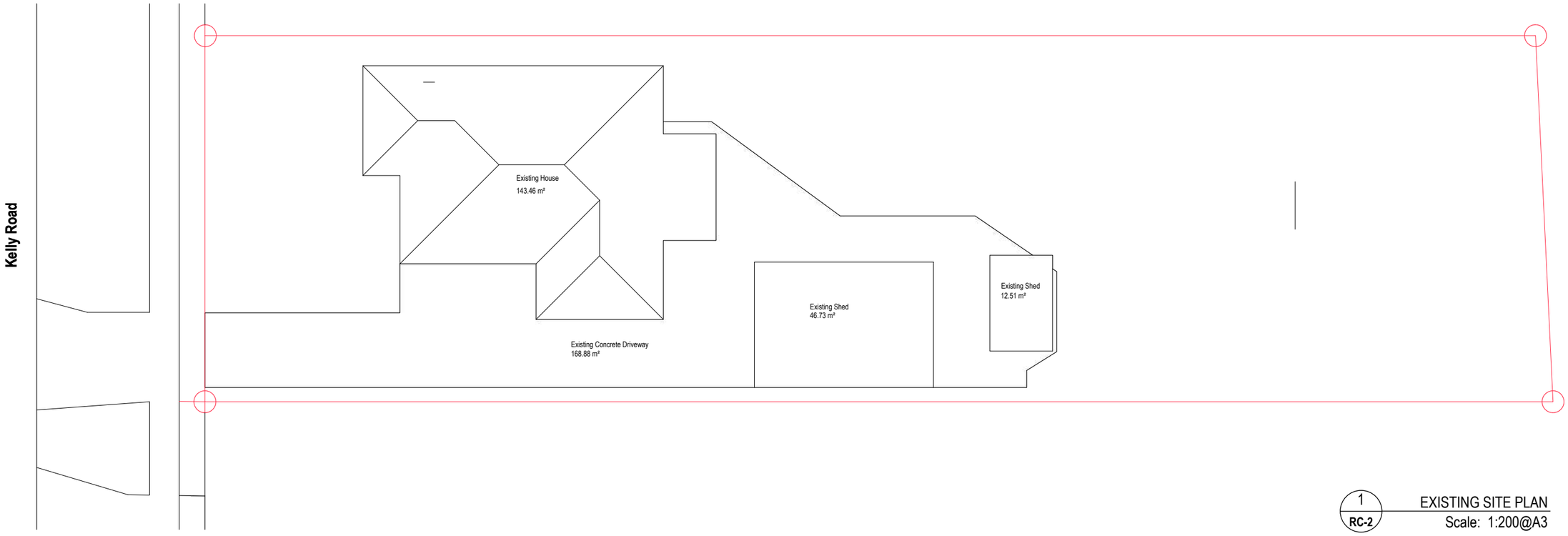


Resource Consent Drawings

Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	COVER PAGE	RC	**RC-1**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	EXISTING SITE PLAN	RC	**RC-2**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN SITE PLAN GL	RC	**RC-3**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LOT PLAN	RC	**RC-4**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PERMERABLE AREA CALCULATION	RC	**RC-5**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LANDSCAPE PLAN	RC	**RC-6**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN L1	RC	**RC-7**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	ELEVATIONS	RC	**RC-8**

Kelly Road Residential Development
Cambridge for
SLOANE STREET LTD

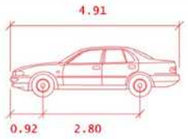
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	COVER PAGE	RC	**RC-1**



1
RC-2

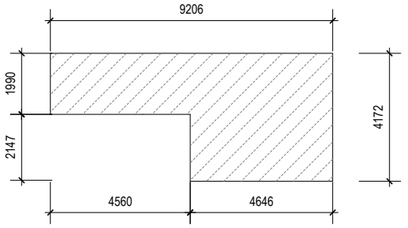
EXISTING SITE PLAN
Scale: 1:200@A3

Project: PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	Client: SLOANE STREET LTD	Documentation: Documentation Date July 5, 2023; Documentation Phase Concept Design	Drawing Information: Approved Stan K; Checked SK; Dwg Scale as shown; Drawn SK	Project No 22002	This drawing is confidential and shall only be used for the purposes of this project. © Copyright SEKTA Architects Ltd, 2012.	P +64 7 853 2204; F +64 7 853 2201; W www.sekta.co.nz; M PO Box 12029 Chartwell Ham.					
		Date	Revision	Revision Description	SC REF	Drawing		Phase	Drawing No		
		Wednesday, July 05, 2023	1	Resource Consent Issue	SC10	EXISTING SITE PLAN		RC	RC-2		

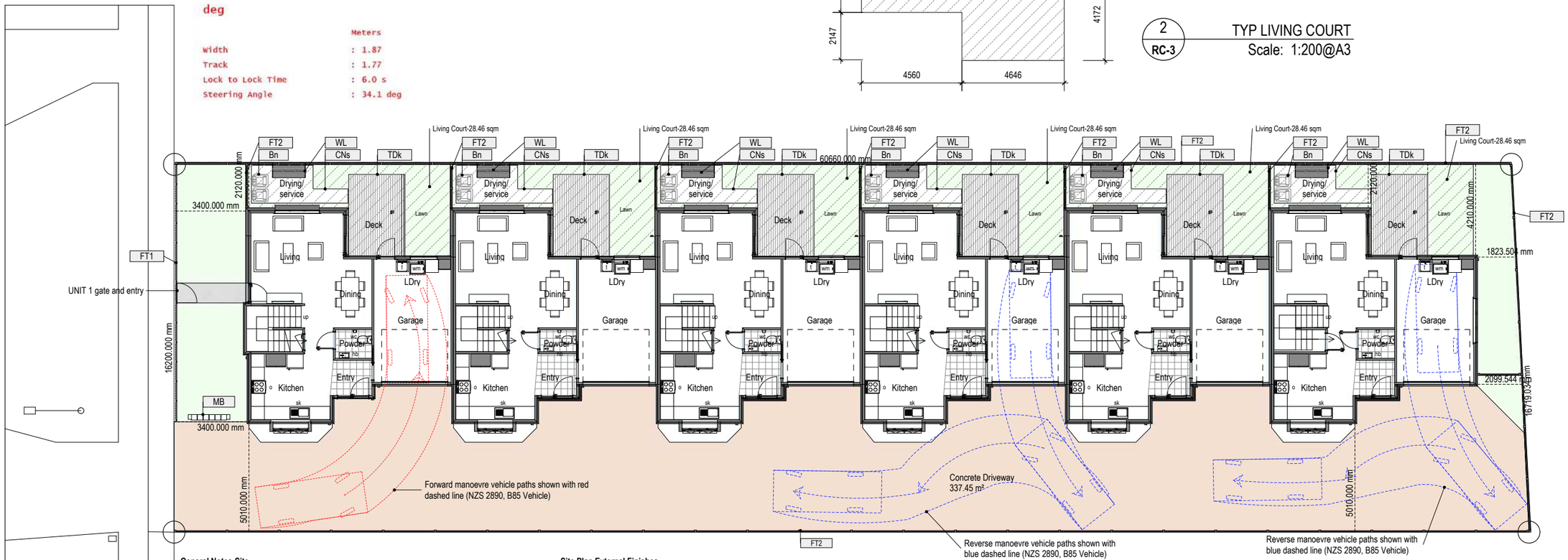


deg

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0 s
Steering Angle	: 34.1 deg



2 RC-3 TYP LIVING COURT
Scale: 1:200@A3



1 RC-3 SITE PLAN GL PLAN
Scale: 1:200@A3

General Notes-Site

Site Area	1019 sqm
Site Address	3 Kelly Road, Cambridge
Legal Description	LOT 5 Deposited Plan South Auckland 1176
EXISTING GFA ON SITE	
Existing House	144
Existing Sheds	58
Concrete Driveway	169
Total Existing GFA on Site	**371**
NEW BUILDING	
Unit 1	
GFA GL	73.12
GFA L1	66.16
Unit 2	
GFA GL	73.12
GFA L1	66.24
Unit 3	
GFA GL	73.12
GFA L1	66.24
Unit 4	
GFA GL	73.12
GFA L1	66.24
Unit 5	
GFA GL	73.12
GFA L1	66.24
Unit 6	
GFA GL	73.12
GFA L1	66.24
Total GFA	**836.08**
Territorial Authority	Waipa District Council
Wind Zone	Zone A
Earthquake Zone	Zone 1
Cliamte Zone	Zone 2
Exposure Zone	Zone B
Boundary Information	Survey and site info shown on architectural drawings is for information only.
Landscaping	Refer Landscaping Plan

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

2 RC-3 SITE LOCALITY PLAN
Scale: 1:3500@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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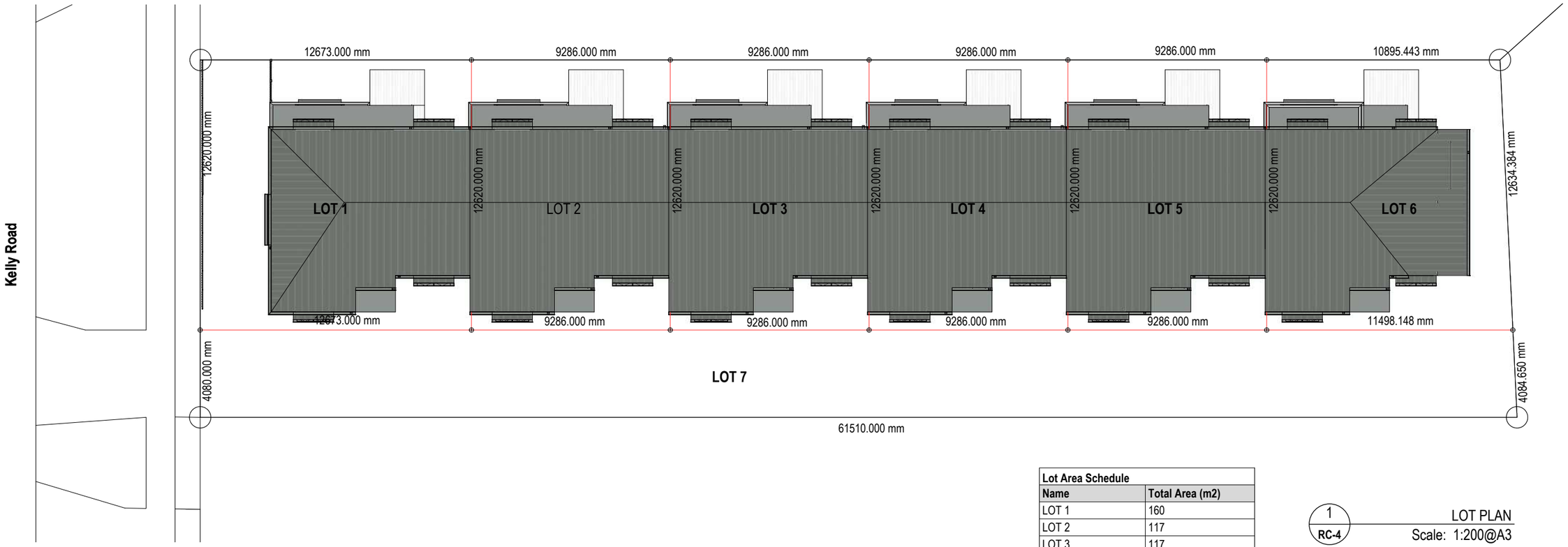
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN SITE PLAN GL	RC	**RC-3**



Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**

1 / RC-4 LOT PLAN
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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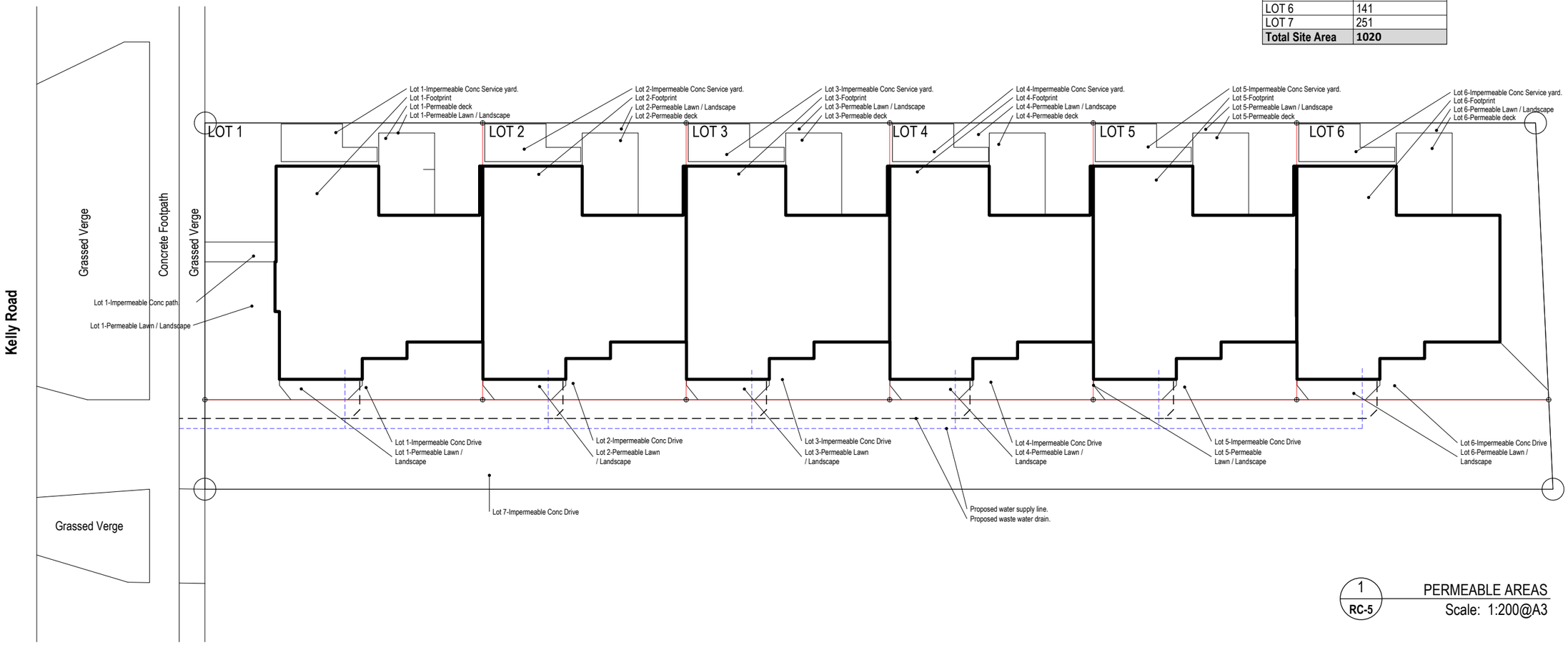
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LOT PLAN	RC	**RC-4**

Site Coverage at roof	
Total Site Area	1020
Total Area at roof	446.36
Site Cover	**43.76%**

Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**



1 / RC-5 PERMEABLE AREAS
Scale: 1:200@A3

Site Permeability Calculation															
Name	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**		**OA Site**
LOT 1		**LOT 2**		**LOT 3**		**LOT 4**		**LOT 5**		**LOT 6**		**LOT 7**			
Lot 1-Footprint	73.12	Lot 2-Footprint	72.11	Lot 3-Footprint	72.11	Lot 4-Footprint	72.11	Lot 5-Footprint	72.11	Lot 6-Footprint	71.73	Lot 7-Impermeable Conc Drive	251		
Lot 1-Permeable deck	9.8	Lot 2-Permeable deck	9.8	Lot 3-Permeable deck	9.8	Lot 4-Permeable deck	9.8	Lot 5-Permeable deck	9.8	Lot 6-Permeable deck	9.8				
Lot 1-Permeable Lawn / Landscape	52.21	Lot 2-Permeable Lawn / Landscape	13.19	Lot 3-Permeable Lawn / Landscape	13.19	Lot 4-Permeable Lawn / Landscape	13.19	Lot 5-Permeable Lawn / Landscape	13.19	Lot 6-Permeable Lawn / Landscape	34.35				
Lot 1-Impermeable Conc Serice Yard and path	8.77	Lot 2-Impermeable Conc Service Yard	5.84	Lot 3-Impermeable Conc Service Yard	5.84	Lot 4-Impermeable Conc Service Yard	5.84	Lot 5-Impermeable Conc Service Yard	5.84	Lot 6-Impermeable Conc Service Yard	5.84				
Lot 1-Impermeable Conc Drive	13.13	Lot 2-Impermeable Conc Drive	13.13	Lot 3-Impermeable Conc Drive	13.13	Lot 4-Impermeable Conc Drive	13.13	Lot 5-Impermeable Conc Drive	13.13	Lot 6-Impermeable Conc Drive	16.47				
Lot 1-Permeable Lawn / Landscape	3.13	Lot 2-Permeable Lawn / Landscape	3.13	Lot 3-Permeable Lawn / Landscape	3.13	Lot 4-Permeable Lawn / Landscape	3.13	Lot 5-Permeable Lawn / Landscape	3.13	Lot 6-Permeable Lawn / Landscape	3.13				
Total	**160.16**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**141.32**			**Site Area**	**1020**
Total Permeable Area	65.14		26.12		26.12		26.12		26.12		47.28			Total Site Permeable Area	216.9
Total Non Permeable Area	95.02		91.08		91.08		91.08		91.08		94.04		250	Total Site Non Permeable Area	803.38
Permeable % of Lot	41%		22%		22%		22%		22%		33%			Permeable % of Total Site	21%
Non Permeable % of Lot	59%		78%		78%		78%		78%		67%			Non Permeable % of Total Site	79%
	100%		100%		100%		100%		100%		100%				100%

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PERMERABLE AREA CALCULATION	RC	**RC-5**

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

FT1-1800h painted closed boarded fence

FT2-1200h Black powder coated pool type fence

1 / RC-6 LANDSCAPE PLAN
Scale: 1:200@A3

GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres

Magnolia Grandiflora-Teddy bear

Pyrus Calleryana-Ornamental Pear

GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

Phormium cookianum-Little Cracker

Phormium cookianum-Evening glow

Phormium cookianum-Emerald Gem

Black Mondo Grass

Project		**Client**	**Documentation**		**Drawing Information**				Project No	**22002**	
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE		SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK			
			Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK			

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LANDSCAPE PLAN	RC	**RC-6**

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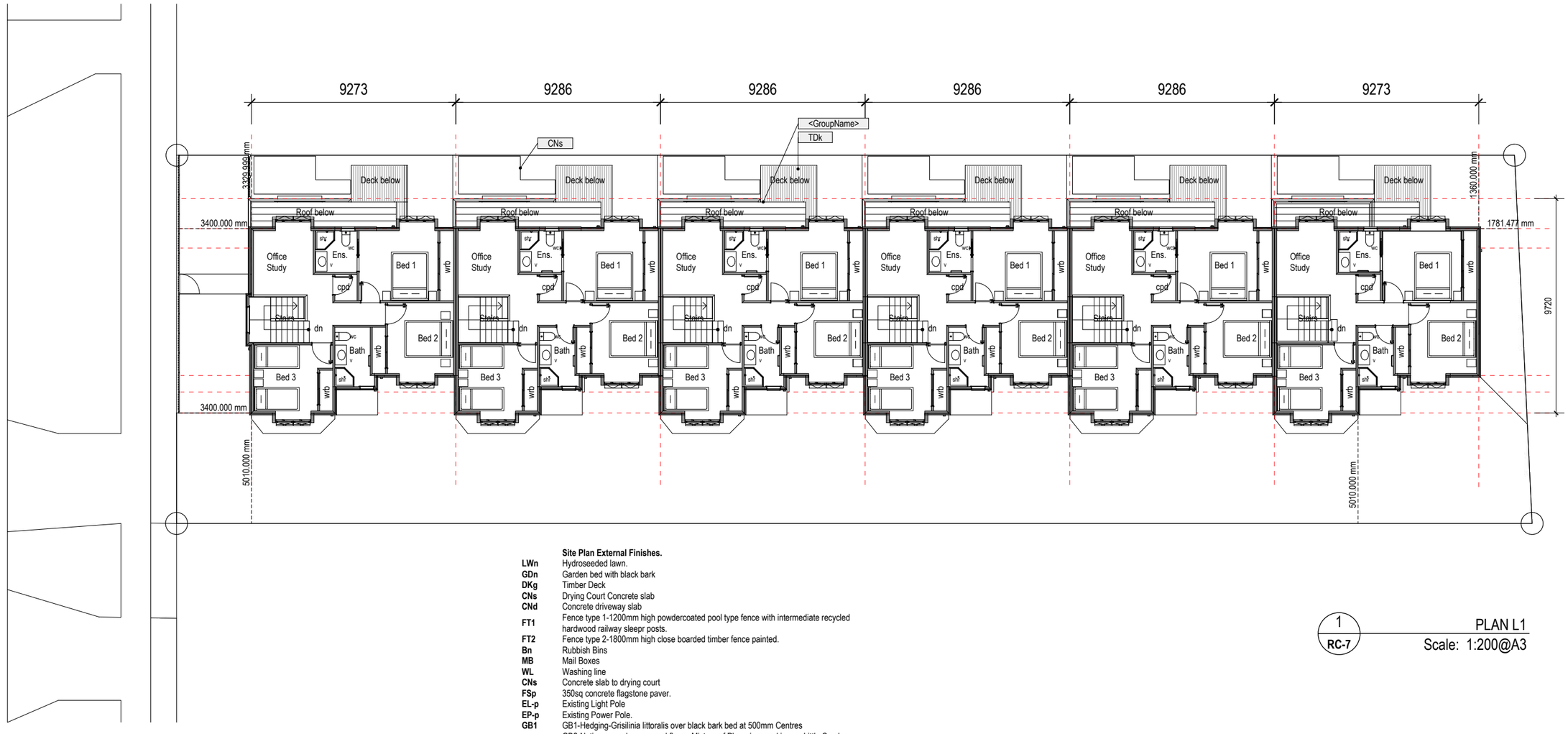
SEKTA ARCHITECTS



Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
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MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

1 / RC-7 PLAN L1

Scale: 1:200@A3

Project	**Client**	**Documentation**		**Drawing Information**				Project No	**22002**
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK		
		Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK		

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN L1	RC	**RC-7**

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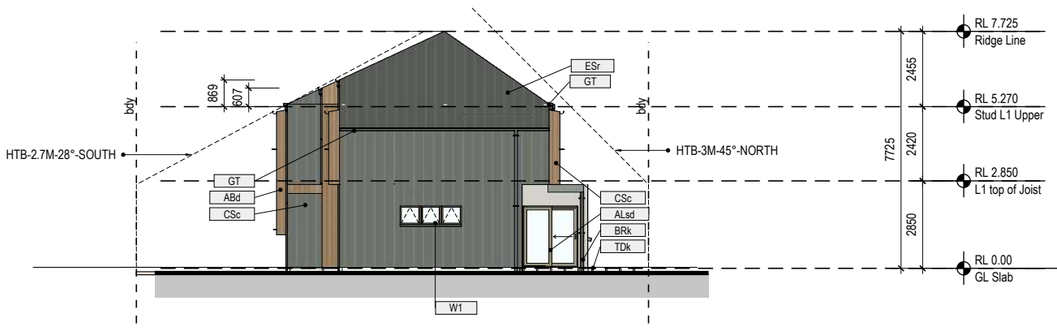
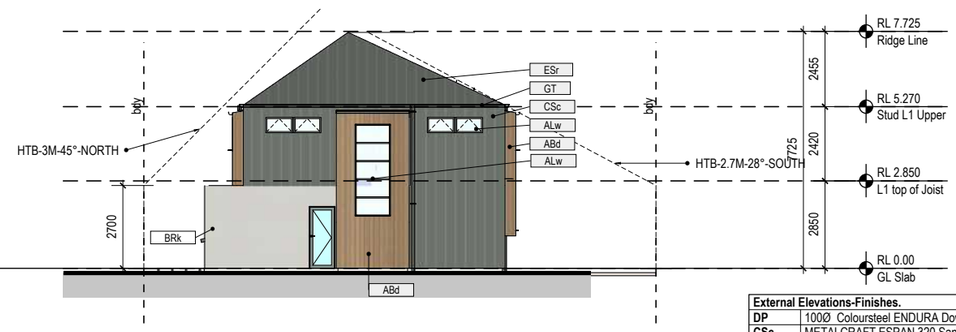
1 RC.8 ELEVATION South
Scale: 1:200@A3



2 RC.8 ELEVATION East
Scale: 1:200@A3



3 RC.8 ELEVATION West
Scale: 1:200@A3

Percentage Glazing to Front façade.	
Ext Wall Area	22.94
Window Area	6.74
Window Area percentage of façade	**29.38%**

External Elevations-Finishes.	
DP	100Ø Coloursteel ENDURA Downpipe colour Grey Friars
CSc	METALCRAFT ESPAN 320 Sandstone wall cladding
ALw	Powdercoated Alum Windows
Ald	Powdercoated Glazed hinged door
Alsd	Powdercoated Alum Sliding Door.
ABd	ABODO Timber cladding
TP	Painted timber post
RSD	Powdercoated panel lift garage door.
TDk	Timber Deck
GT	Coloursteel Gutter
DP	Coloursteel Downpipe
BRk	Selected Brick veneer.
ESr	METALCRAFT ESPAN 320 Sandstone roofing 25 degree roof pitch.
CSf	Coloursteel Fascia.

4 RC.8 ELEVATION North
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	ELEVATIONS	RC	**RC-8**

Rules Assessment

Proposal: Landuse consent to construct a compact housing development comprising of six units.

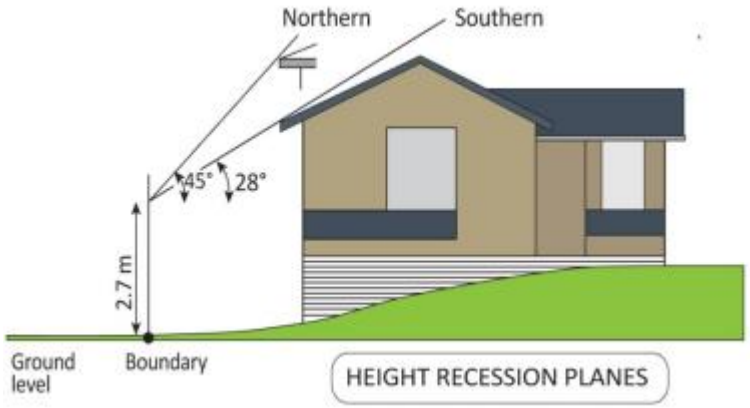
Address: 3 Kelly Road, Cambridge

District Plan: Waipa District Plan

Site Zoning	
Zone	**Residential Zone**
Overlays/Controls	C2 Structure Plan

Rule	Compliance	Comment
Section 2 – Residential Zone		
2.4.1.3b Activity Status Compact housing seven or more dwellings per site located within the compact housing overlay identified on the Planning Maps, or as provided for in Rule 2.4.1.3(c), **or within the following areas of the C1 and C2/C3 Structure Plan areas:** **(i) Within 200m of an active recreation open space, the Town Belt, a neighbourhood centre or a school; or** **(ii) Within 100m of a local centre or local open space; or** (iii) Within a 'compact housing' overlay identified within the structure plan maps. **For compact housing within the C1 and C2/C3 Structure Plan areas, non-compliance with any of the performance standards in Section 2.4.2 shall retain Restricted Discretionary Activity status (and this rule prevails over any rule to the contrary).** Assessment will be restricted to the following matters: ▪ Building location, bulk and design; and ▪ Landscaping; and ▪ Location of parking areas and vehicle manoeuvring; and ▪ CPTED; and ▪ Traffic generation and connectivity; and	**RD**	Being in the C2 Structure Plan Area, and within the location requirements, compact housing retains a Restricted Discretionary activity status.

Rule	Compliance	Comment
▪ Noise; and ▪ Stormwater disposal; and ▪ Alignment with any relevant Urban Design Guidelines approved by Council. These matters will be considered in accordance with the assessment criteria in Section 21.		
2.4.2 Performance Standards		
2.4.2.1 Building setback from road boundaries 3m for compact housing.	Yes	Unit 1 is setback 3.4m from the Kelly Road boundary.
Design of building façade **2.4.2.3** A garage that is integrated into and forms part of a dwelling must not exceed 50% of the total front façade length of a building as measured from the inside internal walls of the garage. **2.4.2.4** A garage that is an accessory building: (a) Must not exceed 50% of the total combined front façade length of a dwelling and detached garage when: (i) Viewed from the street; and (ii) Located either forward of, or directly beside, an existing dwelling.	Yes N/A	The garage associated with Unit 1 does not face the street front. N/A
2.4.2.5 Building setback from internal boundaries Minimum building setback of 2m, provided that one setback may be reduced to 1.5m if all others are compliant	Yes	The eastern boundary setback has been reduced to 1.7m, all other boundary setbacks are at least 2m.
2.4.2.6 – 2.4.2.7	N/A	N/A
2.4.2.8 Building length The maximum length of the wall and roofline of any building parallel or up to an angle of 30 degrees to any internal site boundary that adjoins the Residential Zone or the Reserves Zone shall be 23m, provided that:	**No**	The building line is 55.69m long and is stepped in to a minimum of 2.1m (shortfall of 0.3m). **Restricted Discretionary Activity.**

Rule	Compliance	Comment
(a) Building lines in excess of 23m shall have the wall and roofline stepped to a minimum of 2.4m and a minimum length of 3m; and (b) For every additional 23m in length the wall and roofline of a building shall be stepped to a minimum of 2.4m and a minimum length of 3m.		
2.4.2.9 Cambridge Park Structure Plan: building setback from escarpment	N/A	N/A
2.4.2.10 Maximum height Buildings shall not exceed 9m in height and be no more than two storeys	Yes	The building is two storeys and has a height of 6.9m
2.4.2.11 Daylight control Buildings shall not penetrate a recession plane at right angles to the boundary inclined inwards at the angles shown in the diagram below from 2.7m above ground level at internal site boundaries that adjoin the Residential Zone 	Yes	The building complies with daylight recession planes.
2.4.2.12 Maximum site coverage Site coverage must not exceed 40%	N/A	The rule does not apply to compact housing.
2.4.2.13 Impermeable surfaces Impermeable surfaces must not exceed: (b) 60% of the net site area in the remainder of the residential zone	No	Impermeable surfaces across the entire site equates to 79%. Restricted Discretionary Activity
2.4.2.14 – 2.4.2.18	N/A	N/A

Rule	Compliance	Comment
2.4.2.19 Outdoor living area	N/A	The proposal is for a compact housing development.
Neighbourhood amenity and safety **2.4.2.20** Minimum glazing on the front façade of a building that adjoins a public place shall be 15% provided that: (a) Where a site adjoins a public place, the front façade(s) of a building shall be all the sides of a building that faces the public place; and (b) Where the front façade(s) of a building is not parallel to a public place, the minimum area of glazing shall only apply to the longest wall facing the public place; and (c) Where the front façade(s) of a building is not parallel to a public place and the façades facing the public place are of equal length, then the façade at the least acute angle to the public place shall be deemed to be the front façade and the 15% glazing requirement shall only apply to that façade; and (d) The percentage area of glazing shall be measured as the framed wall opening size to accommodate the entire window.	Yes	The front unit has 29.38% glazing.
2.4.2.21 Fences between buildings on the site and adjoining a road shall be no higher than 1.2m if impermeable or 1.8m if permeable	N/A	No fencing is proposed along the road frontage.
2.4.2.22	N/A	N/A
2.4.2.23 Landscape planting between buildings on the site and any public place shall allow visibility between the dwelling and the public place	Yes	Landscaping is proposed along the road boundary and allows visibility to the street
2.4.2.24 Within the C1 and C2/C3 Structure Plan areas, the roof form of a residential dwelling shall be a gable or hip roof of not less than 30 degrees in pitch. Mono-pitch lean-tos, verandas and other ancillary roof forms are anticipated.	**No**	The roof is a combination of a gable and hip design, but is 25 degrees instead of 30. This is a **Restricted Discretionary** Activity.
2.4.2.25	N/A	N/A

Rule	Compliance	Comment
2.4.2.26 Noise Activities shall be conducted and buildings located, designed and used to ensure that they do not exceed the following noise limits at the boundary of the site: (a) Monday to Saturday - 7.00am to 10.00pm 50dBA (Leq) (b) Sundays & Public Holidays - 8.00am to 6.00pm 40dBA (Leq) (c) Sundays and Public Holidays - 8.00am to 8.00pm 40dBA (Leq) in Character Area 4 in the Cambridge Park Residential Zone (d) At all other times 40dBA (Leq) (e) Night time 10.00pm to 7.00am single noise event 70dBA (Lmax)	Yes	All noise emanating from the site will be associated with a residential activity and will not exceed requirements.
2.4.2.27 Vibration Vibration emanating from a site shall meet the limits recommended in and be measured and assessed in accordance with New Zealand Standard NZS 4403:1996 Code of Practice for Storage, Handling, and Use of Explosives.	Yes	Any vibration from the site will comply with the requirements
2.4.2.28 Construction noise	Yes	Construction will be minimal and all noise will comply with the requirements
Noise insulation: noise sensitive activities **2.4.2.29 – 2.4.2.32**	N/A	N/A
Signs **2.4.2.33 – 2.4.2.34**	N/A	No signs are proposed
Earthworks **2.4.2.35** Earthworks shall not exceed a total volume of 25m³ or a total area of 250m² in a single activity or in cumulative activities in any calendar year, provided that this rule shall not apply to earthworks incidental to an approved resource consent or building consent. **2.4.2.36**	N/A	Only minor earthworks are proposed as part of this application to prepare the site for the building platform.
2.4.2.37 – 2.4.2.43	N/A	N/A
2.4.2.44 Compact housing	Yes	The site is 1,021m^2 and is not in the compact housing overlay.

<table>
<tr><th>Rule</th><th>Compliance</th><th>Comment</th></tr>
<tr><td>Compact housing within the compact housing area overlay shall have a minimum area of 2,000m^2 and shall meet the following requirements:
(a) The maximum length of unbroken building line parallel to all site boundaries including internal site boundaries shall be 20m. Building lines in excess of this standard shall be broken or stepped to a minimum depth of 2.4m and a minimum length of 3m at least once every 20m in length. This rule shall apply to each level of a multi-level building inclusive of the roof; and
(b) Where there is more than one building on a site, it shall be separated from other buildings on the site by at least 3.5m; and
(c) Where any dwelling is to be sited within 10m of another dwelling on the same site or parent title prior to subdivision by way of unit title, cross lease or strata title, there shall be no direct line of sight form the main living areas of the dwelling into the main living areas of another dwelling. If a direct line of sight between main living areas cannot be avoided, visual screening shall be constructed or planted to prevent a direct line of sight; and
(d) Dwellings shall have a dual aspect with windows being placed so that outlook is obtained to the front and rear of the dwelling, with window sills no more than 1m from floor level; and
(e) The following minimum gross floor areas and outdoor living areas shall apply:
<table>
<tr><th>Dwelling</th><th>Minimum floor area of dwelling</th><th>Minimum outdoor living area for ground level dwellings</th><th>Minimum outdoor living area dimensions for ground level dwellings</th><th>Minimum outdoor living area for above ground level dwellings</th><th>Minimum outdoor living area dimensions for above ground level dwellings</th></tr>
<tr><td>Studio units and 1 bedroom unit</td><td>50m^2</td><td>20m^2</td><td>4m</td><td>10m^2</td><td>2m</td></tr>
<tr><td>2 bedroom unit</td><td>70m^2</td><td>30m^2</td><td>4m</td><td>12m^2</td><td>2m</td></tr>
<tr><td>3 bedroom unit</td><td>95m^2</td><td>30m^2</td><td>4m</td><td>14m^2</td><td>2m</td></tr>
</table>
(f) Landscaping and permeable surfaces: At least 30% of the net site area of any site or unit site area shall be grassed, planted in trees and/or shrubs or otherwise landscaped in a manner that retains the permeable nature of the surface.</td><td>No

N/A

N/A

No

No

No</td><td>The building is in excess of 23m and is stepped in to a minimum of 2.1m, every 4.3m.

N/A

N/A

Each unit has at least 95m^2 of floor area.
Each unit is 3 bedrooms and is provided with 28.5m^2 of ODLA, with a dimension of 4m. No balconies are proposed.

Total site permeability equates to 21%

No communal service court is provided, each unit has their own service court.</td></tr>
</table>

Rule	Compliance	Comment
(g) A communal outdoor service area or storage court shall be provided that does not exceed 10m^2 of site area and it shall be screened so that it is not visible from the front boundary of the site.	Yes	Each unit is provided with a private outdoor living area that is situated to the north and is appropriately screened.
(h) Outdoor living areas shall: i. Be located and/or screened so that at least 50% of the outdoor living area has complete visual privacy from the living rooms and outdoor living areas of other dwellings on the same site and shall be screened from adjoining sites; and		
ii. Be oriented to the north, east or west of the dwelling but not the south of east or west measured from the southernmost part of the dwelling; and	N/A	
(i) Any communal outdoor living area provided shall be in addition to, not in substitution of, the required outdoor living area for each dwelling; and	Yes	There is sufficient space along the road boundary
(j) An area for letterboxes at the front of the property; and	Yes	
(k) A place for refuse and recycling material that is accessible to a two-axled truck shall be provided; and	Yes	Unit 1 has a front door which is accessed through the shared accessway, and towards the road.
(l) Dwellings that are parallel to, or adjoin the road boundary of the site shall have a front door that faces the road.		These non-compliances retain a **Restricted Discretionary** activity status.
2.4.2.45 - 2.4.2.54	N/A	N/A

Section 16 - Transportation		
16.4.1.1 Activity Status		
Road hierarchy 16.4.2.1 – 16.4.2.3		
16.4.2.4 Vehicular access to sites in all zones Every site shall be provided with vehicle access to a formed road that is constructed to a permanent standard. The vehicle access shall be designed to accommodate the demands	Yes	The existing vehicle crossing on Kelly Road will be upgraded to provide access to the development.

of all traffic from the activity on that site, taking into account the form and function of the road		
16.4.2.5 Vehicle entrance separation from intersections and other entrances The minimum distance of a vehicle entrance (accessway) from an intersection or other entrance shall be as follows, where the values for K, M and N are included in the following table		
16.4.2.6 – 16.4.2.12	N/A	N/A
Parking, loading and manoeuvring area **16.4.2.13** All activities that involve the erection, construction or substantial reconstruction, alteration or addition to a building on any site, or changes the use of any land or building, shall provide loading/unloading spaces for vehicles on the site as set out in Appendix T1. **16.4.2.14** Vehicle parking (if provided), loading/unloading, and manoeuvring areas shall: (a) Not encroach on any setback, outdoor living area, or bicycle parking spaces; and loading/unloading areas and manoeuvring areas shall not encroach over vehicle parking spaces; and (b) Be designed, formed, and constructed to ensure that the surface of the required area provides a dust free environment; and (c) Provide for the safe and efficient disposal of surface stormwater clear of any adjoining access or road surface in a way that does not result in ponding or scouring; and (d) Be constructed to accommodate the anticipated use of the area by all traffic likely to access the site in the zone in which it is located, including construction traffic taking into account pavement, surfacing, demarcation of spaces, aisles and circulation roads; and (e) Be provided on the site on which the building, activity or proposal is located, except where the provisions of Rules 16.4.2.15 and 16.4.2.16 apply. Provided that: (i) In all zones the vehicle entrance may cross the road boundary setback; and (ii) For front and corner sites in the Residential Zone where Rules 16.4.2.15 and 16.4.2.16 do not apply, vehicle parking and manoeuvring areas associated with dwellings may	Yes Yes	Each unit is provided with onsite parking and manoeuvring space within the ROW to allow all vehicles to exit onto Kelly Road in a forward direction. The provided individual parking spaces are compliant with the relevant requirements in a – e.

encroach into the setbacks, provided that a 1m wide setback is retained at the road boundary, excluding the vehicle entrance; and (v) In the Residential and Commercial Zones, vehicle parking, loading/unloading and manoeuvring areas must be sealed and drained; and		
Exemption for onsite vehicle manoeuvring areas in the Residential Zone 16.4.2.15	N/A	N/A
16.4.2.16 – 16.4.2.17	N/A	N/A
16.4.2.18 Vehicle manoeuvring areas loading and unloading spaces, and if provided, parking spaces, including those spaces located in a garage, shall be provided on a site, of a standard adequate to accommodate a 99.8 percentile car, or a 99 percentile truck, in order to ensure that all vehicles have the ability to access the adjoining road in a forward direction after no more than a three point turning manoeuvre on the site, except where Rule 16.4.2.16 applies.	Yes	Onsite manoeuvring is shown on page XX of the landuse plans
16.4.2.19 All car parks (if provided) shall be marked or delineated on site, except in the Residential Zone and in the St Peters School Zone.	N/A	N/A
16.4.2.20 Carpark landscaping and lighting Other than in the St Peters School Zone, all car parks must: (a) Provide at least one tree planted for every 5 car parking spaces at a grade of no less than PB95. For the avoidance of doubt, PB95 is equivalent to a tree that is at least 1.5m tall at the time of planting; and (b) Ensure lighting is designed to avoid shading areas or isolating areas of public use.	N/A	Each unit is provided with an individual internal parking space.
16.4.2.21 Provision of bicycle parking facilities In areas other than the Rural Zone and Pedestrian Frontages, activities employing more than ten people must provide bicycle parking facilities at a rate of one bicycle park for every ten people employed.	N/A	N/A
16.4.2.22 Provision of an integrated transportation assessment	N/A	N/A

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

3 WATERS ASSESSMENT REPORT
Proposed New Units
Lot 5 DPS 1176
3 Kelly Road, Cambridge

- **Geotechnical Investigation & Design**
- **Structural and Civil Design**
- **Earthquake Engineering and Assessments**
- **Traffic and Safety Assessments**
- **Road Design and Asset Management**
- **Water/Wastewater/Stormwater Design and Modelling**
- **Project and Construction Management**
- **Mediation**
- **Training**
- **Research and Development**

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3 Waters Assessment
Proposed New Units
July 2023

This report has been prepared for Joshua Te Weehi by GDC Consultants Ltd (GDC). No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other parties.

This disclaimer shall apply notwithstanding that the report may be made available to other persons for an application for permission or approval to fulfil a legal requirement.

Revision	A (Section 1.2, 2.5.4 3.1, 3.2, 3.3 Appendix B, G and H)
Status	For Consent

Quality Assurance Statement		
Task	**Responsibility**	**Signature**
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Approved by:	Clement Fernando CPEng. No. 202146	12/7/2023

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File No: J003406_REV-A

Contents

1.0 Introduction

1.1 Project Details

Client's Name	Joshua Te Weehi
Site Address	3 Kelly Road, Cambridge
Legal Description	Lot 5 DPS 1176

1.2 Project Description

The client is proposing to build six (06) units at the above site address. Each unit will include a garage. GDC Consultants Ltd has been engaged by the Client to conduct a 3 Waters assessment for the proposed units. Each proposed unit will have floor area of approximately 73m^2, unit 01-05 will have driveway area of approximately 13m^2 and unit 06 will have driveway area of approximate 16m^2 with a shared driveway area of 251m^2 according to plans provided by the architect. The detailed design of these services will be required at the building consent stage.

This report should be read in conjunction with the geotechnical assessment of the property undertaken by GDC Consultants in April 2022 (GDC ref. J003406 Rev A).

1.3 Scope

This report undertakes to:

- Assess soil conditions and the stormwater disposal requirements for the site;
- Make recommendations on suitable stormwater systems for the site for water detention
- Recommend measures to mitigate scour and erosion effects on the stormwater outlet;
- Identify hazards associated with the site (flooding, inundation);

This report does not assess the following:

- Contamination of soil
- Geotechnical assessment
- Detailed liquefaction assessment
- Detailed Natural Hazard assessment

The findings of this report will be used to support a resource consent application for the duplexes proposed in the brief.

2.0 Existing Site Details

2.1 Site Description

The site is located approximately 70 metres northeast of the intersection of Cambridge Road and Kelly Road. Access to the property is from Kelly Road. The site was grassed at the time of our investigations. The site is currently occupied with two dwellings and a garage which will be demolished prior to any construction work.

The property is in a deferred residential zone with an approximate area of 1,019m^2 and located within the Waipa District. A site location plan is given in Appendix A.

2.2 Topography

The site and surrounding areas are generally on a flat ground.

2.3 Existing Services

Utility	Reticulation/Mains Present	Method Required
Stormwater	N	On-Site
Wastewater	Y	Connection to mains network
Water Supply	Y	Connection to mains Supply

2.4 Identified Hazards

Flooding

The site is not located within Local or Regional Scale Flood Hazard Zone, as indicated on the Waikato Regional Hazards Portal prepared by Waikato Regional Council.

Determination of finished floor level does not form part of this report.

Erosion, Subsidence, Slippage

At the time of on-site investigation, there was no visual evidence of erosion, subsidence or slippage observed on this site.

Please refer to Appendix D for the Hazards Maps.

2.5 Site Testing / Results

2.5.1 Soil Test Location

On-site soil testing was undertaken using hand-augers to a depth of 3.0m to determine the subsoil profile and permeability (soakage) testing to a depth of 1.2m. Testing was conducted in accordance with the Site Investigation Plan provided in Appendix G.

2.5.2 Soil Profile

Depth (mm)	Major Characteristic	Minor Characteristic
0-300	Topsoil	
300-800	Silty sand	Black and moist
800-1200	Silty sand	Light brown, moist and little cohesive

Depth (mm)	Major Characteristic	Minor Characteristic
0-300	Topsoil	
300-1100	Silty sand	Brown and moist
1100-1200	Medium coarse sand	Brown and moist

Depth (mm)	Major Characteristic	Minor Characteristic
0-300	Topsoil	
300-400	Silty sand	Brown and moist
400-1200	Medium coarse sand	Brown and moist

As groundwater was not encountered during on-site testing, it must be assumed to be as high as the base of the deepest borehole excavated, at a depth of 3.0m. However, as testing was undertaken in September, the peak wet winter water table has been estimated in accordance with Hamilton City Council Three Waters Management Practice Note HCC 03: Soakage, Table 1, which assumes no groundwater rise above that observed on-site throughout this month. Therefore, a peak wet winter groundwater level of 3.0m has been used within this design.

2.5.3 Subsoil Profile Confirmation

Additional Soil Classification referencing has been undertaken using Landcare Research S-Maps Online Tool to verify the subsoil profile found during on-site testing. S-Maps shows the soils in this area are classified as well drained loam over sand and have a moderate permeability rating, which is partially consistent with the soils encountered on-site. Refer to Appendix G for S-maps Soil Report.

2.5.4 Soakage Testing

Soakage testing was undertaken during on-site testing. The results of the soakage tests carried out on site by GDC, indicates soakage rates of

- SW1 – 7.68m/day or 320mm/hr
- SW2 – 7.20m/day or 300mm/hr

- SW3 – 47.5m/day or 1980mm/hr. However, a conservative soakage rate of 36m/day or 1500mm/hr is adopted for location of SW 03 design purposes.

NOTE:

- The soakage rate of 7.20m/day or 300mm/hr has been assumed to provide a conservative assessment, however, further field testing should be undertaken within the soakage field during the detailed design stage. A soakage reduction factor of 0.5 has been applied to this soakage rate to account for a loss of performance over time and to recognise the organisation of maintenance by the joint owners is likely to be a slow process. As such, a soakage rate of 3.60m/day or 150mm/hr has been used within the preliminary calculations.

3.0 Stormwater Management

Summary table of New Zealand Building Code Clause E1 Surface Water, Section 9.0.5;

Soakage rate >500mm/hr	Soakage primary mechanism for stormwater disposal
Soakage rate <500mm/hr	Storage primary mechanism for stormwater disposal
Soakage rate <150mm/hr	Soakage not recommended

The storm water design recommendations contained in this report have been prepared in accordance with the Building Act acceptable solution (E1 VM1), and local Council rules and requirements.

3.1 Key Design Criteria

Known Consent Conditions	-	None
Design Storm Event	-	10year ARI, 60 minute duration
Rainfall Intensity*	-	Historical 10yr 1hr: 34.3mm/hr
	-	Historical 10yr 10min: 91.0 mm/hr
	-	RCP4.5 (2081-2100) 10yr 1hr: 39.7mm/hr
	-	RCP4.5 (2081-2100)10yr 10min: 105mm/hr
Post Development Outflow Rate	-	Not to exceed pre-development for same storm event
Climate Change Factor	-	2.1° Celsius temperature increase
Soakage Feasible	-	Yes
Site Constraints	-	limited space available for soakage
Detention Required	-	Yes
Sources of Runoff	-	Total roof area – 447m^2 (0.95 runoff coefficient**)
	-	Total driveway area - 372m^2 (0.85 runoff coefficient**)
Excluded Areas	-	Off-site runoff
	-	Areas not identified by client for assessment
	-	Pervious areas

*HIRDS v4.0 03/09/2021
**Obtained from New Zealand Building Code Clause E1, Table 1, and adjusted as per Table 2

3.2 Stormwater Management Criteria

Modular Soakage System	-	Proposed Roof and driveway areas	-	Minimum Basal Area: 30m^2
			-	Depth: 0.7m
			-	Suitable systems include, but are not limited to: - Iplex AquaCell - Cirtex RainSmart - Global Synthetics ProTank
			-	Systems typically rated for light traffic loading and required a minimum of 0.6m cover
			-	System to be installed in accordance with manufacturer specifications
			-	Base of system must be flat and no closer than 0.2m to highest seasonal groundwater table. If groundwater encountered, contact GDC Consultants Ltd in the first instance.
			-	Dispersal pipe to be laid at minimum 1% grade
			-	To be enclosed in filter cloth complying with AS3706.1, which shall have a mass per unit area of 140 grams/m^2 and a minimum thickness of 0.45mm

- Sides and top to be wrapped in impermeable PVC lining

The E1 design procedure is an acceptable solution in terms of the Building Act that the Council must approve for building consent purposes. E1 provides that Council may apply additional requirements to the on-site stormwater design. The composite runoff coefficient for a site can be calculated by the method defined in E1 and is a function of the various types of surface cover that comprise the final developed Lots and their individual areas.

This report estimates the actual peak runoff, based on the architectural and landscape feature defined by the client at time of subdivision. At this stage a conservative approach has been taken to design with the objective of allowing no increase in peak runoff from the lots post-development.

3.3 Future Hardstand Stormwater Runoff

Stormwater runoff from future construction above and beyond the scope of this report, should not be allowed to enter the system as it will exceed the design specifications. For any future hardstand areas and driveways, the stormwater requirements should be assessed by a suitably qualified engineer.

Note:
• All impervious areas shall be constructed to falls that do not allow runoff to flow cross the building platform.

4.0 Wastewater Management

As per Section 5.1.3 of the Regional Infrastructure Technical Specifications, the wastewater system must achieve the following standards:

a) Pipelines shall not surcharge at the peak design wet weather flow.
b) The system shall not be designed to overflow under normal conditions.
c) Pumping station emergency storage shall not be used for flow buffering purposes.
d) The system shall be designed with self-cleaning velocities.

In accordance with Section 5.2.4.2 of the Regional Infrastructure Technical Specifications, the wastewater flows shall be calculated using the following criteria:

a) Domestic Average Daily Flow (ADF) is 200 litres per person per day
b) Infiltration allowance is 2250 litres per hectare per day
c) Surface water ingress is 16500 litres per hectare per day
d) Peaking Factors as per Table 5-2.
e) Population Equivalent as per Table 5-3.
f) Gross contributing land area upstream of the wastewater pipe is defined as the total catchment area, excluding reserve land, but including land within legal road boundaries

Based on Table 5-9 within Section 5.2.8.2 of the Regional Infrastructure Technical Specifications, a 150mm diameter connection is required to serve more than 4 units. therefore, the existing 100mm should be upgraded to 150mm and extended to the rear of the lot. From this 150mm connection, lateral connections of 100mm can be provided for each new unit.

5.0 Water Supply

As per Section 6.1.3.1 of the Regional Infrastructure Technical Specifications, the water supply network must achieve the following standards:

a) The residual pressure and flow at point of supply to residential lots shall be a minimum of 200 kPa (20m) and 25 L/min.
b) The minimum fire supply service level shall be FW2 for residential areas and FW3 for all other areas.

In accordance with Section 6.2.3 of the Regional Infrastructure Technical Specifications, the water demand allowance shall include provision for:

a) A domestic demand of 260 litre/person/day with a peak flow rate of five times this amount for On Demand Supply.
b) Population targets
c) The area to be serviced
d) Property size and layout

e) Proposed land use (zoning)
f) Design pressures including the requirements of SNZ PAS 4509

The existing dwelling has a water connection from the water mains along Kelly Road and new connection will be required for the new units. However, a detailed design will be required at the building consent stage to accommodate all the requirements.

5.1 Fire Hydrants

Based on the services map prepared by Waipa District Council. The fire hydrant is located 52.2m North of the property. The fire hydrants are closer than the minimum requirement (270m and 135m) for FW2 sites as per SNZ PAS 4509:2008.

6.0 Conclusions and Recommendations

6.1 Stormwater

Based on the results of our investigations we make the following conclusions and recommendations:

a) Stormwater management is assessed in Section 3.0. Note that this assessment is based on assumptions outlined within this Section, and further specification will be required during the detailed design stage.

6.2 Wastewater

Based on the results of our investigations we make the following conclusions and recommendations:

a) The impact of the proposed development and the consequent increased density of development on wastewater discharge can be fully mitigated.

b) This report outlines one method of achieving satisfactory disposal of wastewater whilst ensuring that compliance with Waipa District Council is maintained. Other methods or modifications to the specified method may be possible. For example, wastewater collection and pumping to the main should insufficient grade be available for gravity connection. This is to be confirmed and further specified during the detailed design stage.

6.3 Water

Based on our desktop study for the above-mentioned site, we make the following conclusions and recommendations:

a) Water supply requirements are assessed in section 5.0. Note that this assessment is based on the minimum Council requirements, and water supply in excess of this may be required. Further specification will be required during the detailed design stage.
b) Connection to or modification of Council assets shall only be done by or with the specific approval of Council.

7.0 Limitations

This report has been prepared for Joshua Te Weehi as our Client in accordance with the agreed scope of services. The reliance by other parties on this document shall without our prior agreement in writing be at such parties' sole risk.

The observations noted in the investigations have been extrapolated between the various test locations to infer probable site conditions.

Recommendations and opinions in this report are based on data obtained from the investigations and site observations as detailed in this report. The nature and continuity of subsoil conditions at locations other than the investigation bore and tests are inferred and it should be appreciated that actual conditions could vary from the assumed model. If ground conditions are found to vary from that described or assumed, the matter should in the first instance be referred back to GDC for comment.

Please contact any of the undersigned persons for further information. If there are any questions arising from the above or during construction, please call this office.

This report shall not be used to interpret any form of financial transaction.

Contamination and liquefaction assessments are outside of the scope of this document.

8.0 References

Waikato Regional Council, Waikato Regional Hazards Portal.
https://waikatoregion.maps.arcgis.com/apps/MapSeries/index.html?appid=f2b48398f93146e8a5cf0aa3fddce92c

Waikato Regional Council, LocalMaps – Contours
https://waikatomaps.waikatoregion.govt.nz/Viewer/?map=8d6d6fda779b4e59951953ae97d0ec4a

Waipa Council, – Property & Utilities.
https://vega.intramaps.co.nz/intramaps90/?configId=c9a5d33f-2458-4f3b-888c-a89e47729685&project=Waipa&module

Building Industry Authority (2002), *Approved Document for New Zealand Building Code Surface Water, Clause E1 AS1*

GDC Consultants Ltd (September 2021), Geotechnical Investigation Report.

National Institute of Water and Atmospheric Research (NIWA), *High Intensity Rainfall Design System (HIRDS) V4.0*. https://hirds.niwa.co.nz/

NZWERF (2004), *On-Site Stormwater Management Guideline*

Regional Infrastructure Technical Specifications Manual
https://waikatolass.co.nz/wp-content/uploads/2019/01/Regional-Infrastructure-Technical-Specification-V1.0.pdf

APPENDIX A

Site Location Plan

Print Date: 3/09/2021
Print Time: 2:04 AM

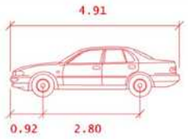
Scale: 1:330

Original Sheet Size A4

Projection: NZGD2000 / New Zealand Transverse Mercator 2000
Bounds: 1815636.29231309,5803635.63069979
1815748.22760071,5803697.87764021

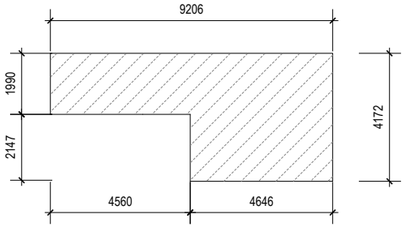
APPENDIX B

Proposed Scheme Plan

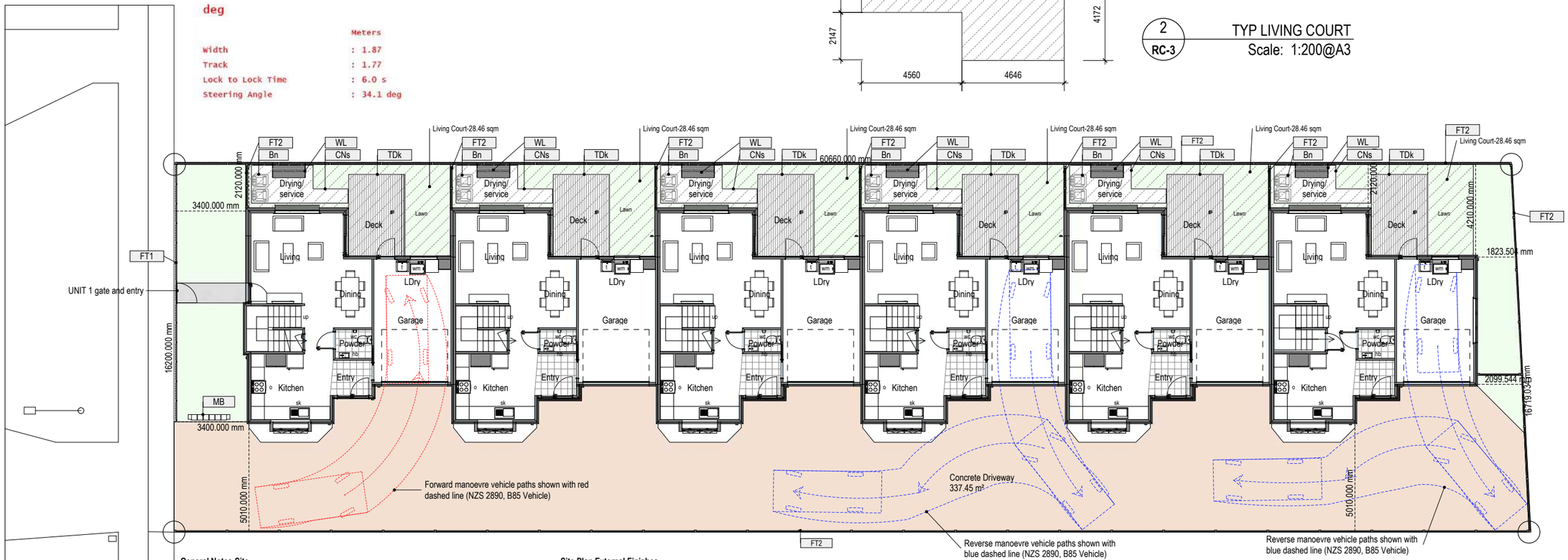


deg

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0 s
Steering Angle	: 34.1 deg



2 RC-3 TYP LIVING COURT
Scale: 1:200@A3



1 RC-3 SITE PLAN GL PLAN
Scale: 1:200@A3

General Notes-Site

Site Area	1019 sqm
Site Address	3 Kelly Road, Cambridge
Legal Description	LOT 5 Deposited Plan South Auckland 1176
EXISTING GFA ON SITE	
Existing House	144
Existing Sheds	58
Concrete Driveway	169
Total Existing GFA on Site	**371**
NEW BUILDING	
Unit 1	
GFA GL	73.12
GFA L1	66.16
Unit 2	
GFA GL	73.12
GFA L1	66.24
Unit 3	
GFA GL	73.12
GFA L1	66.24
Unit 4	
GFA GL	73.12
GFA L1	66.24
Unit 5	
GFA GL	73.12
GFA L1	66.24
Unit 6	
GFA GL	73.12
GFA L1	66.24
Total GFA	**836.08**
Territorial Authority	Waipa District Council
Wind Zone	Zone A
Earthquake Zone	Zone 1
Cliamte Zone	Zone 2
Exposure Zone	Zone B
Boundary Information	Survey and site info shown on architectural drawings is for information only.
Landscaping	Refer Landscaping Plan

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

2 RC-3 SITE LOCALITY PLAN
Scale: 1:3500@A3

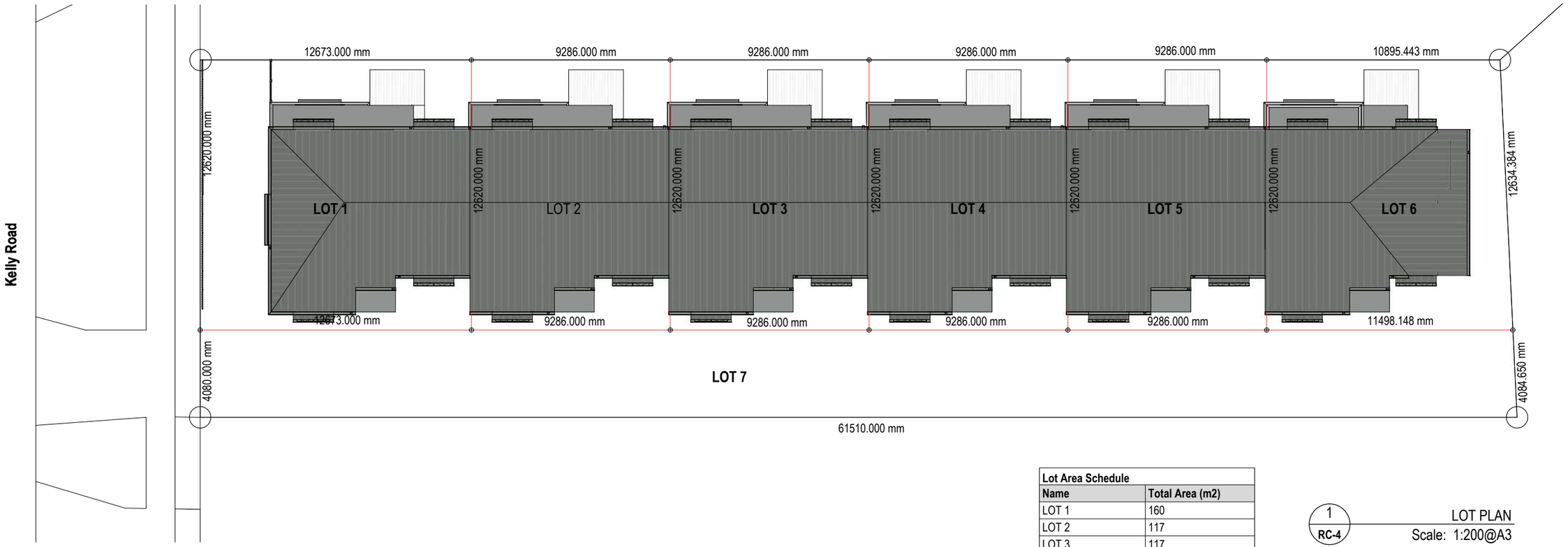
Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

P +64 7 853 2204
F +64 7 853 2201
W www.sekta.co.nz
M PO Box 12029 Chartwell Ham.

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN SITE PLAN GL	RC	**RC-3**



Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**

1 / RC-4 LOT PLAN
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

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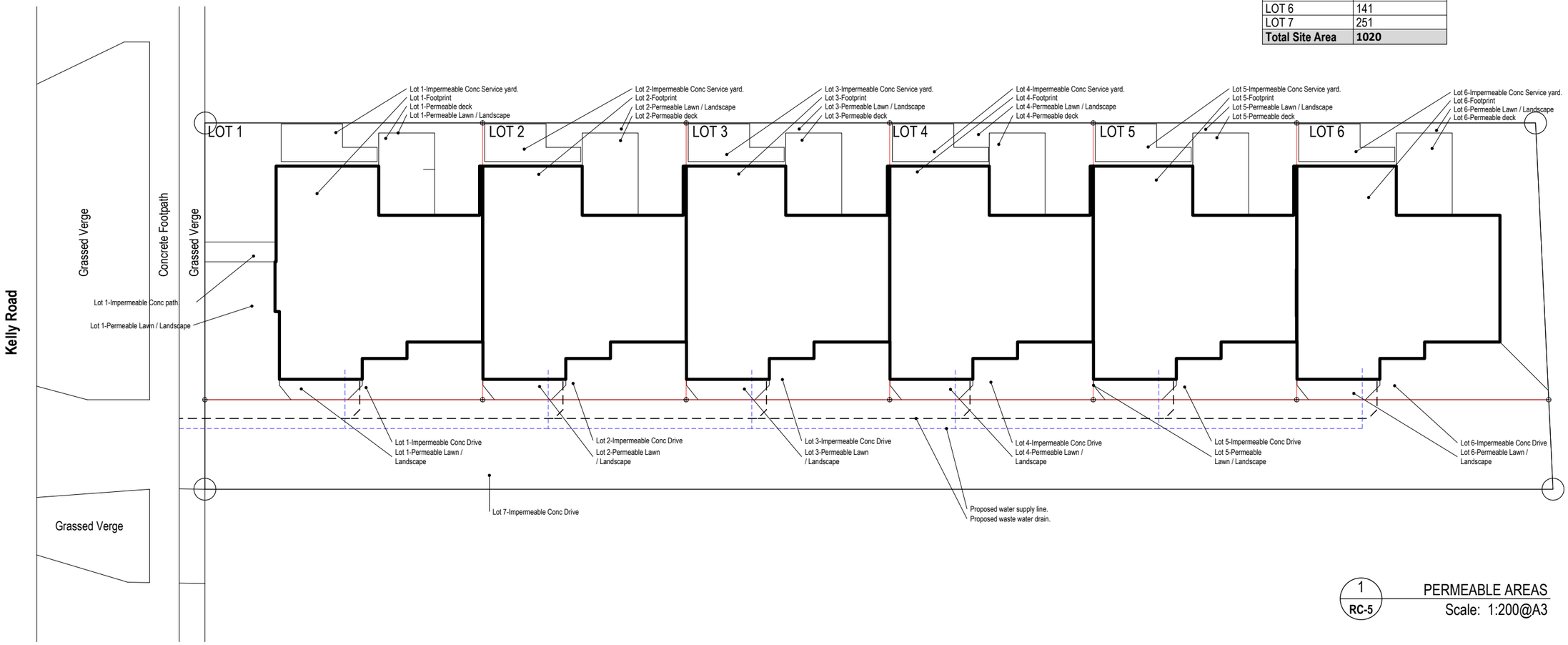
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LOT PLAN	RC	**RC-4**

Site Coverage at roof	
Total Site Area	1020
Total Area at roof	446.36
Site Cover	**43.76%**

Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**



1 / RC-5 PERMEABLE AREAS
Scale: 1:200@A3

Site Permeability Calculation															
Name	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**		**OA Site**
LOT 1		**LOT 2**		**LOT 3**		**LOT 4**		**LOT 5**		**LOT 6**		**LOT 7**			
Lot 1-Footprint	73.12	Lot 2-Footprint	72.11	Lot 3-Footprint	72.11	Lot 4-Footprint	72.11	Lot 5-Footprint	72.11	Lot 6-Footprint	71.73	Lot 7-Impermeable Conc Drive	251		
Lot 1-Permeable deck	9.8	Lot 2-Permeable deck	9.8	Lot 3-Permeable deck	9.8	Lot 4-Permeable deck	9.8	Lot 5-Permeable deck	9.8	Lot 6-Permeable deck	9.8				
Lot 1-Permeable Lawn / Landscape	52.21	Lot 2-Permeable Lawn / Landscape	13.19	Lot 3-Permeable Lawn / Landscape	13.19	Lot 4-Permeable Lawn / Landscape	13.19	Lot 5-Permeable Lawn / Landscape	13.19	Lot 6-Permeable Lawn / Landscape	34.35				
Lot 1-Impermeable Conc Serice Yard and path	8.77	Lot 2-Impermeable Conc Service Yard	5.84	Lot 3-Impermeable Conc Service Yard	5.84	Lot 4-Impermeable Conc Service Yard	5.84	Lot 5-Impermeable Conc Service Yard	5.84	Lot 6-Impermeable Conc Service Yard	5.84				
Lot 1-Impermeable Conc Drive	13.13	Lot 2-Impermeable Conc Drive	13.13	Lot 3-Impermeable Conc Drive	13.13	Lot 4-Impermeable Conc Drive	13.13	Lot 5-Impermeable Conc Drive	13.13	Lot 6-Impermeable Conc Drive	16.47				
Lot 1-Permeable Lawn / Landscape	3.13	Lot 2-Permeable Lawn / Landscape	3.13	Lot 3-Permeable Lawn / Landscape	3.13	Lot 4-Permeable Lawn / Landscape	3.13	Lot 5-Permeable Lawn / Landscape	3.13	Lot 6-Permeable Lawn / Landscape	3.13				
Total	**160.16**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**141.32**			**Site Area**	**1020**
Total Permeable Area	65.14		26.12		26.12		26.12		26.12		47.28			Total Site Permeable Area	216.9
Total Non Permeable Area	95.02		91.08		91.08		91.08		91.08		94.04		250	Total Site Non Permeable Area	803.38
Permeable % of Lot	41%		22%		22%		22%		22%		33%			Permeable % of Total Site	21%
Non Permeable % of Lot	59%		78%		78%		78%		78%		67%			Non Permeable % of Total Site	79%
	100%		100%		100%		100%		100%		100%				100%

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

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Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PERMERABLE AREA CALCULATION	RC	**RC-5**

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

FT1-1800h painted closed boarded fence

FT2-1200h Black powder coated pool type fence

1 / RC-6 LANDSCAPE PLAN
Scale: 1:200@A3

GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres

Magnolia Grandiflora-Teddy bear

Pyrus Calleryana-Ornamental Pear

GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

Phormium cookianum-Little Cracker

Phormium cookianum-Evening glow

Phormium cookianum-Emerald Gem

Black Mondo Grass

Project		**Client**	**Documentation**		**Drawing Information**				Project No	**22002**	
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE		SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK			
			Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK			

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LANDSCAPE PLAN	RC	**RC-6**

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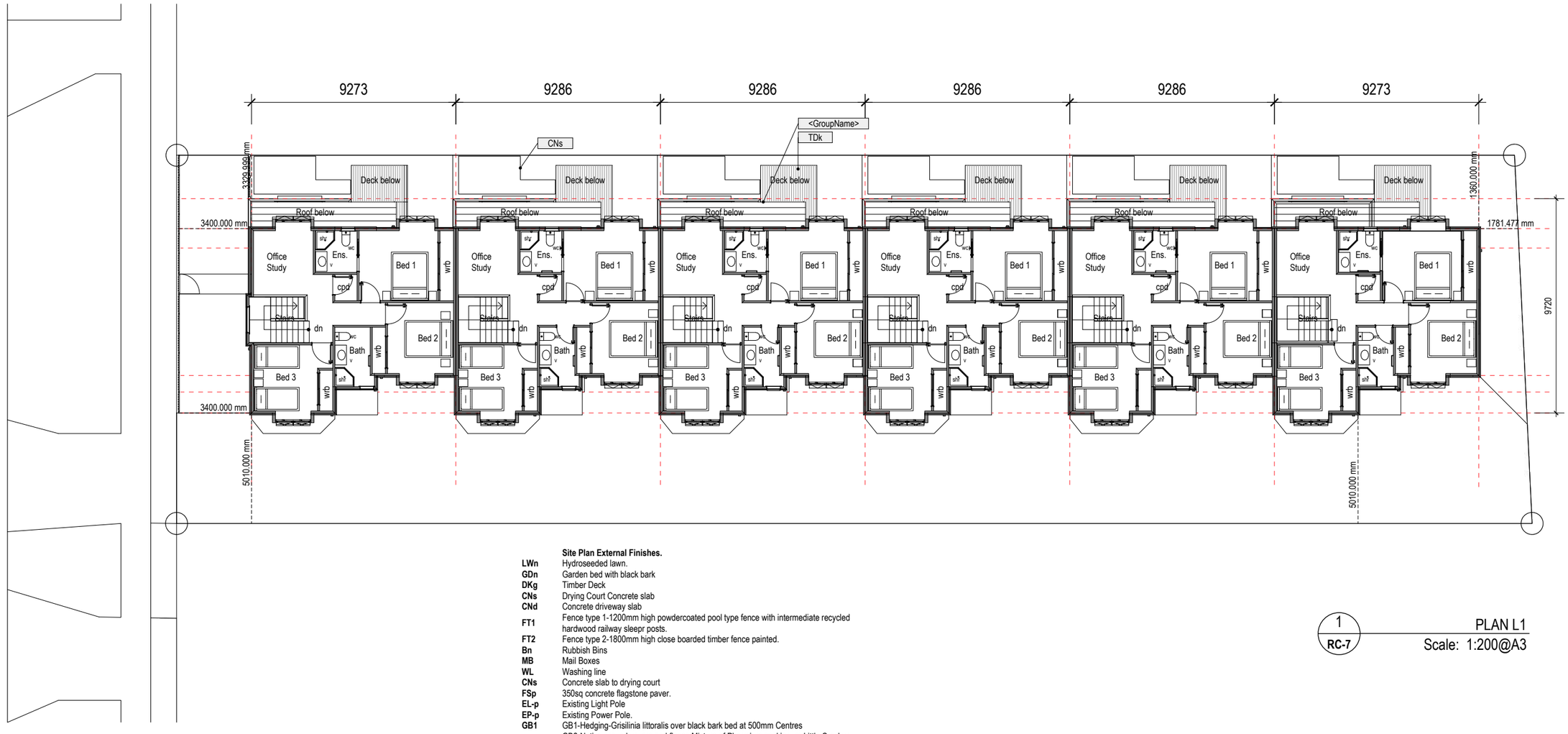
SEKTA ARCHITECTS



Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

1 / RC-7 PLAN L1

Scale: 1:200@A3

Project	**Client**	**Documentation**		**Drawing Information**				Project No	**22002**
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK		
		Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK		

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN L1	RC	**RC-7**

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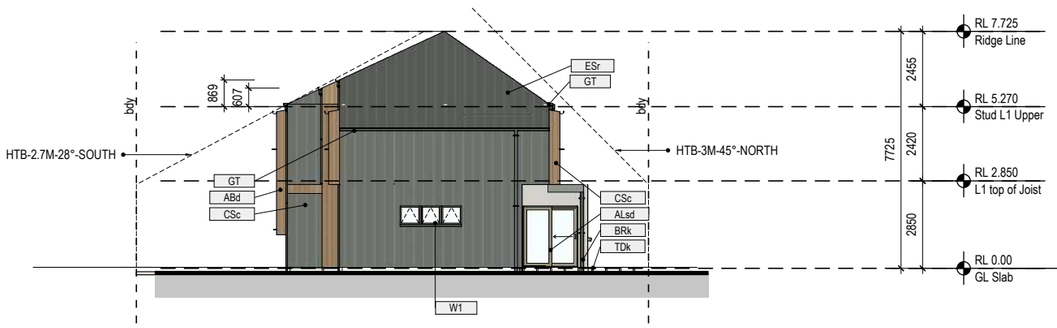
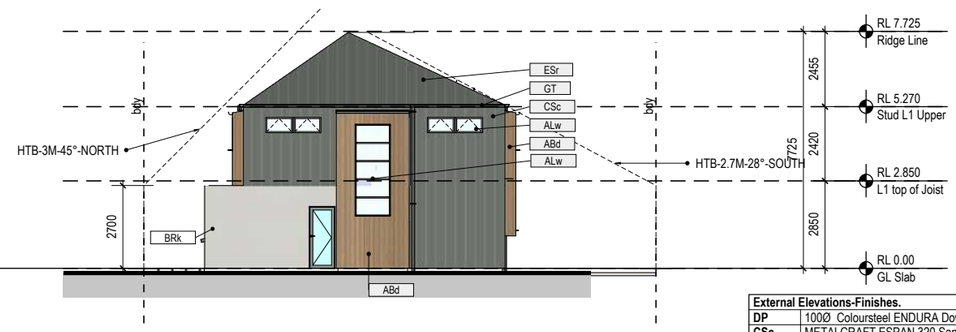
SEKTA ARCHITECTS

1 RC.8 ELEVATION South
Scale: 1:200@A3



2 RC.8 ELEVATION East
Scale: 1:200@A3



3 RC.8 ELEVATION West
Scale: 1:200@A3

Percentage Glazing to Front façade.	
Ext Wall Area	22.94
Window Area	6.74
Window Area percentage of façade	**29.38%**

External Elevations-Finishes.	
DP	100Ø Coloursteel ENDURA Downpipe colour Grey Friars
CSc	METALCRAFT ESPAN 320 Sandstone wall cladding
ALw	Powdercoated Alum Windows
Ald	Powdercoated Glazed hinged door
Alsd	Powdercoated Alum Sliding Door.
ABd	ABODO Timber cladding
TP	Painted timber post
RSD	Powdercoated panel lift garage door.
TDk	Timber Deck
GT	Coloursteel Gutter
DP	Coloursteel Downpipe
BRk	Selected Brick veneer.
ESr	METALCRAFT ESPAN 320 Sandstone roofing 25 degree roof pitch.
CSf	Coloursteel Fascia.

4 RC.8 ELEVATION North
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

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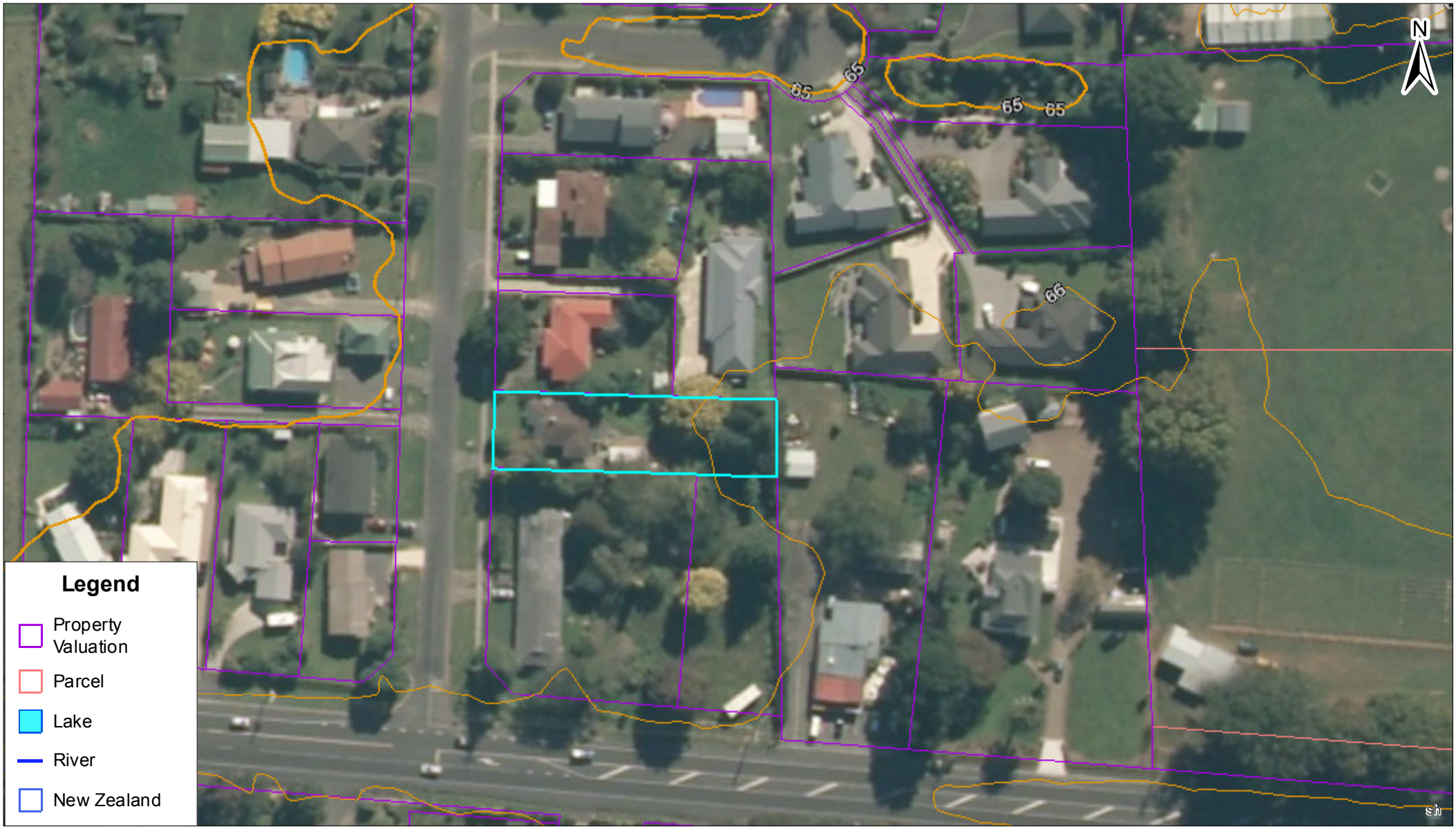
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	ELEVATIONS	RC	**RC-8**

APPENDIX C

Contour Map



Acknowledgements and Disclaimers:
Data from various sources including, but not limited to, Land Information NZ, Landcare Research NZ, NZ Aerial Mapping, Statistics NZ and Waikato Regional Council - Copyright Reserved.
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https://www.waikatoregion.govt.nz/services/maps/terms-of-use/ .
For specific copyright and disclaimer information for the data displayed in this map please refer to the relevant dataset metadata within the Waikato Regional Council Data Catalogue:
https://www.waikatoregion.govt.nz/services/data-catalogue/

Contour Map

0 0.08 km

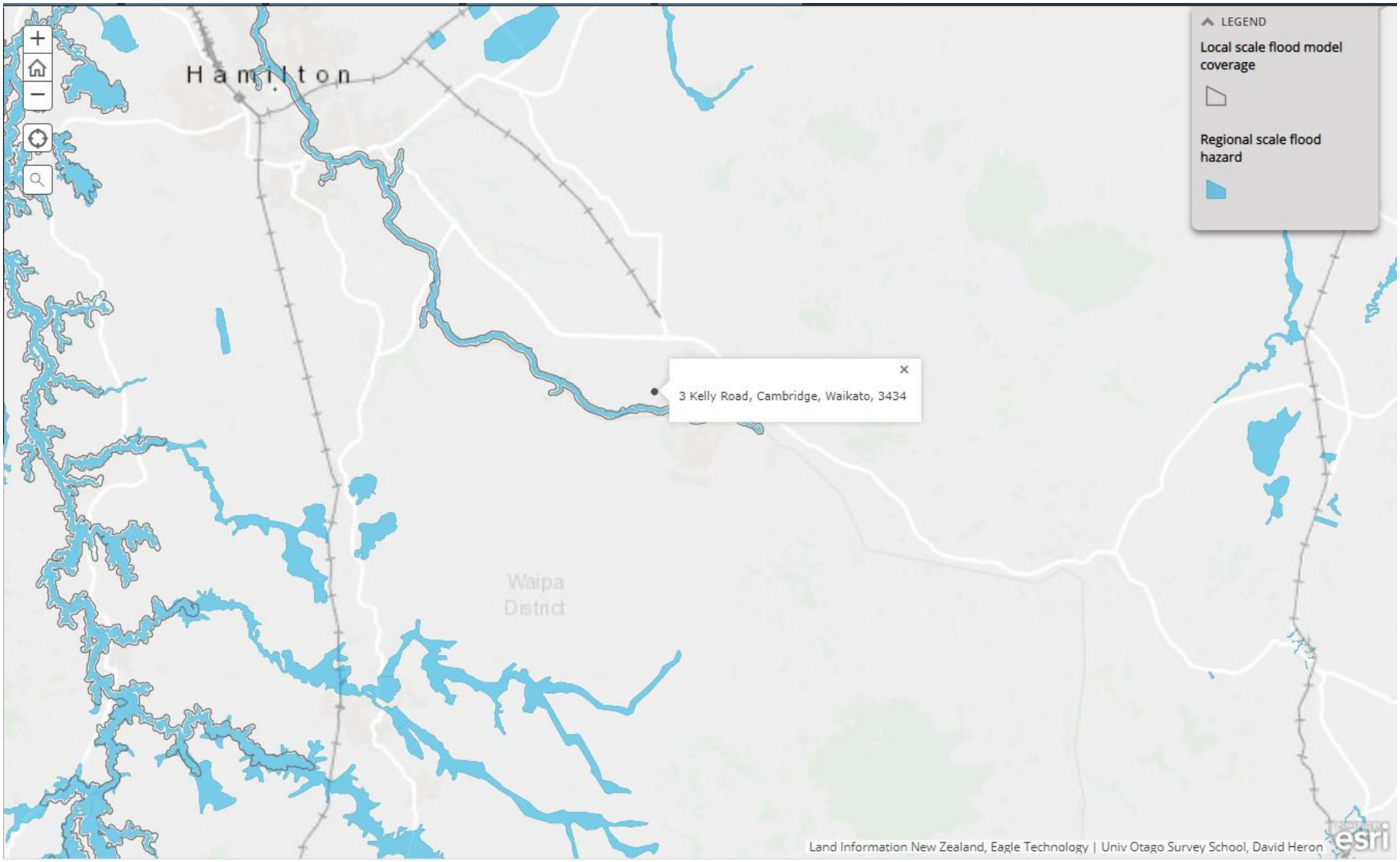
Scale at A4 = 1:1,129

Date: 3/09/2021

Waikato REGIONAL COUNCIL
Te Kaunihera ā Rohe o Waikato

APPENDIX D

Flood Hazard Map



APPENDIX E

Site Investigation Plan

GDC Consultants Ltd
Site Investigation Plan

July 2023

Job: J003406

APPENDIX F

Results of On-Site Testing

Client	Joshua Te Weehi
Site Address	3 Kelly Road, Cambridge
Job No	J003406
Date	02.09.2021
Site Assessment by	JC

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Stormwater Soil Profiles

SW Test 01

Depth [mm]	Horizon Description
0-300	TOPSOIL
300-800	Silty sand, black and moist
800-1200	Silty sand, Light brown, moist and little cohesive

EOB = 1.2 metres
GWL = Not found

SW Test 02

Depth [mm]	Horizon Description
0-300	TOPSOIL
300-1100	Silty sand, brown and moist
1100-1200	Medium coarse sand, brown and moist

EOB = 1.2 metres
GWL = Not found

SW Test 03

Depth [mm]	Horizon Description
0-300	TOPSOIL
300-400	Silty sand, brown and moist
400-1200	Medium coarse sand, brown and moist

EOB = 1.2 metres
GWL = Not found

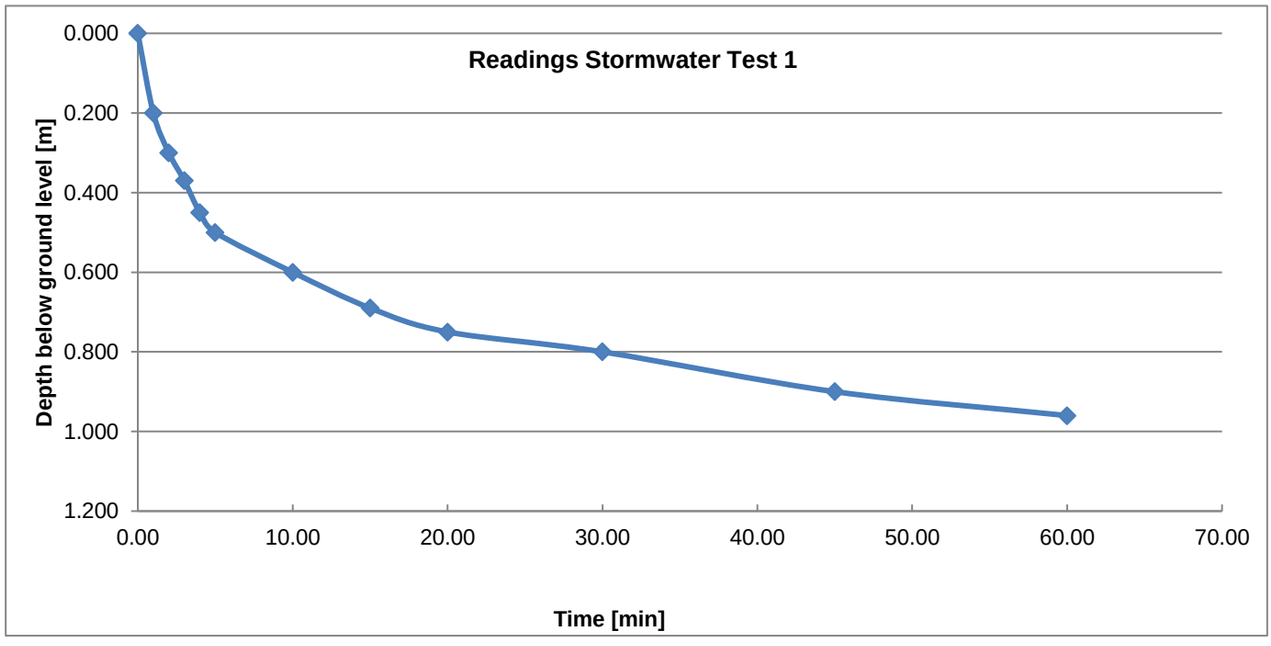
Client	Joshua Te Weehi
Site Address	3 Kelly Road, Cambridge
Job No	J003406
Date	02.09.2021
Site Assessment by	JC

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Stormwater Soakage Test 1

Site Location	3 Kelly Road,		**Method**	NZBC E1/VM1	
Land Use	Residential		**Test Hole Diameter**	0.1	m
Vegetation	Grassed		**Test Hole Depth**	1.2	m
Weather Condition	Sunny		**Groundwater Level**	N/A	m

Time	Water Level	t1	t2	h1	h2	Change in Time	Change in Level	*k*	*k*
[min]	[m]	[sec]	[sec]	[m]	[m]	[sec]	[m]	[m/d]	[mm/hr]
0.00	0.000								
1.0	0.20	0	60	1.20	1.00	60	0.20	2.88E+02	1.20E+04
2.0	0.30	60	120	1.00	0.90	60	0.10	1.44E+02	6.00E+03
3.0	0.37	120	180	0.90	0.83	60	0.07	1.01E+02	4.20E+03
4.0	0.45	180	240	0.83	0.75	60	0.08	1.15E+02	4.80E+03
5.0	0.50	240	300	0.75	0.70	60	0.05	7.20E+01	3.00E+03
10.0	0.60	300	600	0.70	0.60	300	0.10	2.88E+01	1.20E+03
15.0	0.69	600	900	0.60	0.51	300	0.09	2.59E+01	1.08E+03
20.0	0.75	900	1200	0.51	0.45	300	0.06	1.73E+01	7.20E+02
30.0	0.80	1200	1800	0.45	0.40	600	0.05	7.20E+00	3.00E+02
45.0	0.90	1800	2700	0.40	0.30	900	0.10	9.60E+00	4.00E+02
60.0	0.96	2700	3600	0.30	0.24	900	0.06	5.76E+00	2.40E+02
					Average			7.68E+00	3.20E+02



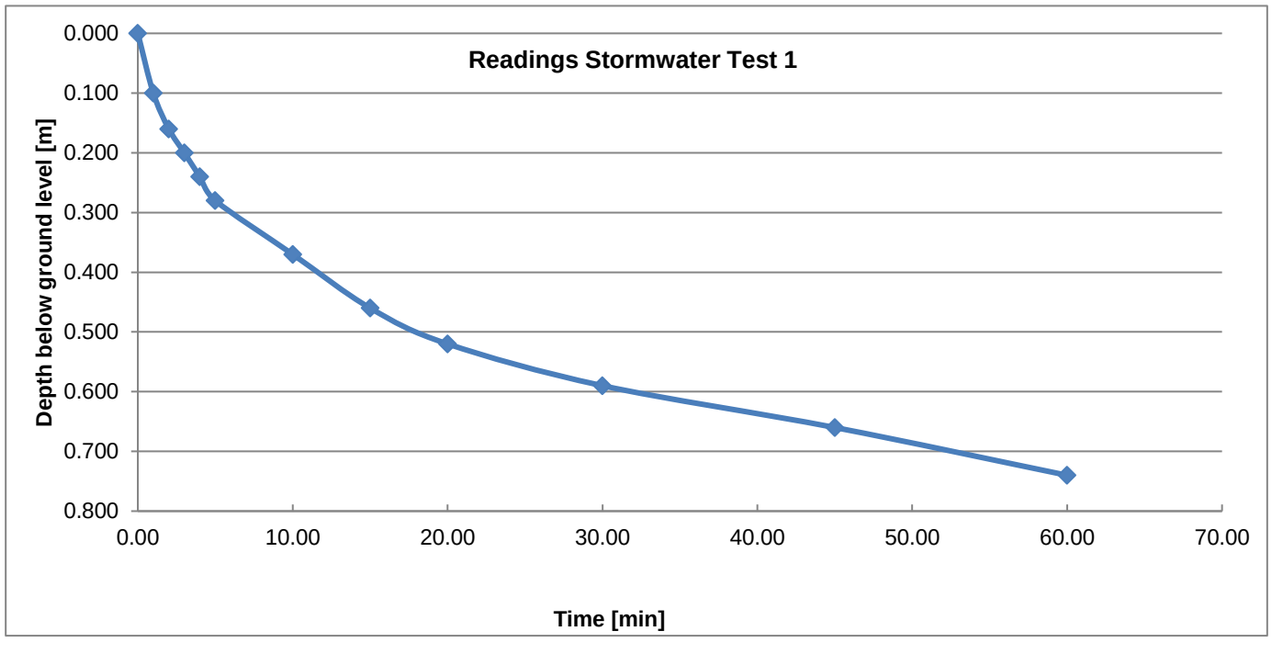
Client	Joshua Te Weehi
Site Address	3 Kelly Road, Cambridge
Job No	J003406
Date	02.09.2021
Site Assessment by	JC

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Stormwater Soakage Test 2

Site Location	3 Kelly Road,		**Method**	NZBC E1/VM1	
Land Use	Residential		**Test Hole Diameter**	0.1	m
Vegetation	Grassed		**Test Hole Depth**	1.2	m
Weather Condition	Sunny		**Groundwater Level**	N/A	m

Time	Water Level	t1	t2	h1	h2	Change in Time	Change in Level	*k*	*k*
[min]	[m]	[sec]	[sec]	[m]	[m]	[sec]	[m]	[m/d]	[mm/hr]
0.00	0.000								
1.0	0.10	0	60	1.20	1.10	60	0.10	1.44E+02	6.00E+03
2.0	0.16	60	120	1.10	1.04	60	0.06	8.64E+01	3.60E+03
3.0	0.20	120	180	1.04	1.00	60	0.04	5.76E+01	2.40E+03
4.0	0.24	180	240	1.00	0.96	60	0.04	5.76E+01	2.40E+03
5.0	0.28	240	300	0.96	0.92	60	0.04	5.76E+01	2.40E+03
10.0	0.37	300	600	0.92	0.83	300	0.09	2.59E+01	1.08E+03
15.0	0.46	600	900	0.83	0.74	300	0.09	2.59E+01	1.08E+03
20.0	0.52	900	1200	0.74	0.68	300	0.06	1.73E+01	7.20E+02
30.0	0.59	1200	1800	0.68	0.61	600	0.07	1.01E+01	4.20E+02
45.0	0.66	1800	2700	0.61	0.54	900	0.07	6.72E+00	2.80E+02
60.0	0.74	2700	3600	0.54	0.46	900	0.08	7.68E+00	3.20E+02
					Average			7.20E+00	3.00E+02



Client	Joshua Te Weehi
Site Address	3 Kelly Road, Cambridge
Job No	J003406
Date	02.09.2021
Site Assessment by	JC

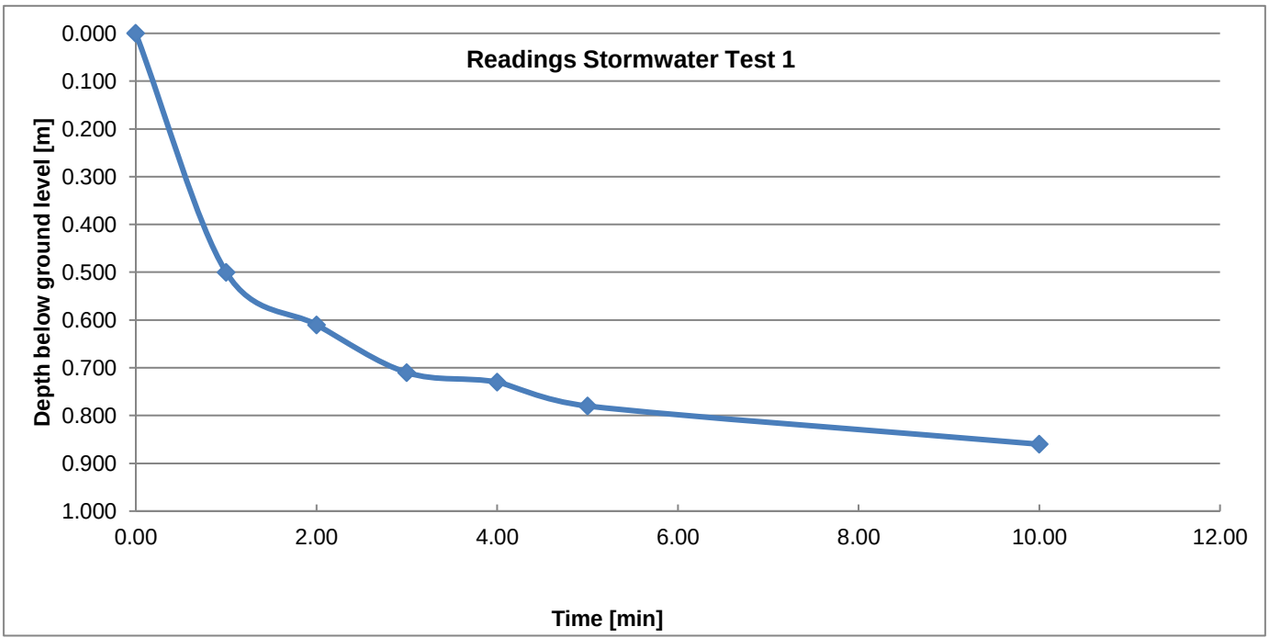
GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Stormwater Soakage Test 3

Site Location	3 Kelly Road,		**Method**	NZBC E1/VM1	
Land Use	Residential		**Test Hole Diameter**	0.1	m
Vegetation	Grassed		**Test Hole Depth**	1.2	m
Weather Condition	Sunny		**Groundwater Level**	N/A	m

Time	Water Level	t1	t2	h1	h2	Change in Time	Change in Level	*k*	*k*
[min]	[m]	[sec]	[sec]	[m]	[m]	[sec]	[m]	[m/d]	[mm/hr]
0.00	0.000								
1.0	0.50	0	60	1.20	0.70	60	0.50	7.20E+02	3.00E+04
2.0	0.61	60	120	0.70	0.59	60	0.11	1.58E+02	6.60E+03
3.0	0.71	120	180	0.59	0.49	60	0.10	1.44E+02	6.00E+03
4.0	0.73	180	240	0.49	0.47	60	0.02	2.88E+01	1.20E+03
5.0	0.78	240	300	0.47	0.42	60	0.05	7.20E+01	3.00E+03
10.0	0.86	300	600	0.42	0.34	300	0.08	2.30E+01	9.60E+02
					Average			4.75E+01	1.98E+03

please be aware soakage rate is high, recommend conservative rate of 1500mm/hr adopted during design



APPENDIX G

Stormwater Calculations

Joshua Te Weehi
3 Kelly Road, Cambridge
Proposed Unit 01 to Unit 05
Soak Pit calculations in accordance with VM E1/VM1

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Chartered Professional Engineers & Mediators

Dwelling	447	m^2	Job No	**J003406 -REV-A**
Driveway	372	m^2	Date	05/07/2023
			By	IJ
Total Area	819.0	m^2		

rainfall in 1 hour event 10 year return period	39.7	mm/hour	
volume	32.51	m3	
runoff factor	0.90		
global warming factor	2.10	°C	
Design volume	29.26		
soakage rate	320.0	mm/hour	

Soak Pit

rectangular area — void factor 0.95

length	width	depth	volume	net volume
60	0.5	0.7	21.00	19.95

area 30 soakage per hour 9.60

volume plus soakage must be greater than rainfall 29.55 OK

APPENDIX H

Stormwater Management Plan

JOSHUA TE WEEHI
PROPOSED SUBDIVISION
3 KELLY ROAD,CAMBRIDGE

DRAWING REGISTER		
SHEET NUMBER	SHEET NAME	CURRENT REVISION DATE
00	COVER PAGE	
01	GENERAL NOTES	
02	STORMWATER MANAGEMENT PLAN	

GDC
Consultants Ltd
Chartered Professional Engineers & Mediators
PHONE: (07) 282 0736

FOR CONSENT

J003406

GENERAL NOTES

TO BE READ IN CONJUNCTION WITH GDC CONSULTANTS LTD STORMWATER MANAGEMENT REPORT.

LOCATION OF SOAKAGE TRENCH IS NOT TO DIFFER FROM THAT SHOWN ON STORMWATER MANAGEMENT PLAN UNLESS AGREED PRIOR TO CONSTRUCTION WITH GDC CONSULTANTS LTD.

ALL PIPEWORK TO BE 100mm∅ U-PVC UNLESS OTHERWISE STATED.

ALL DIMENSION IN MM UNLESS OTHERWISE STATED.

DO NOT SCALE DRAWING. USE STATED DIMENSION ONLY.

LEGAL BOUNDARIES TO BE CHECKED BY THE BUILDER BEFORE COMMENCING WORK.

CONTRACTOR TO ENSURE MINIMUM PIPE GRADIENT 1%

CONSTRUCTION NOTES

CONTRACTOR TO CHECK ALL DIMENSION PRIOR TO COMMENCEMENT OF ANY WORK.

CONTRACTOR TO CONFIRM SETOUT, ALL LEVELS, INVERTS AND PIPE GRADIENTS PRIOR TO CONSTRUCTION.

INSPECTION MUST BE COMPLETED BY GDC CONSULTANTS PRIOR TO COMPLETION OF CONSTRUCTION FOR ISSUE OF GDC PS4

INSPECTION MUST BE ARRANGED 48HRS PRIOR TO CONSTRUCTION COMPLETION

SIDE AND TOP OF TRENCH ARE TO BE WRAPPED WITH IMPERMEABLE PVC LINING,LEAVING THE BASE FREE FOR SOAKAGE

STORMWATER SETBACKS	
MIN. SETBACK REQUIREMENT	SEPARATION DISTANCE (MINIMUM)
BUILDINGS / HOUSES	3.0m WITH PVC LINING
PROPERTY BOUNDARIES	1.5 m

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE

FOR CONSENT

Rev	Details	By	Chkd	Date

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Telephone: (07) 078380090
Email: hamilton@gdcgroup.co.nz

Address: 89 Church Road, Pukete, Hamilton 3200, New Zealand

Also at : Thames Whitianga Rotorua Napier Wellington Auckland
Web: www.gdcgroup.co.nz

TELARC REGISTERED SUPPLIER ISO 9001

Client
JOSHUA TE WEEHI

Project
PROPOSED SUBDIVISION
3 KELLY ROAD,CAMBRIDGE

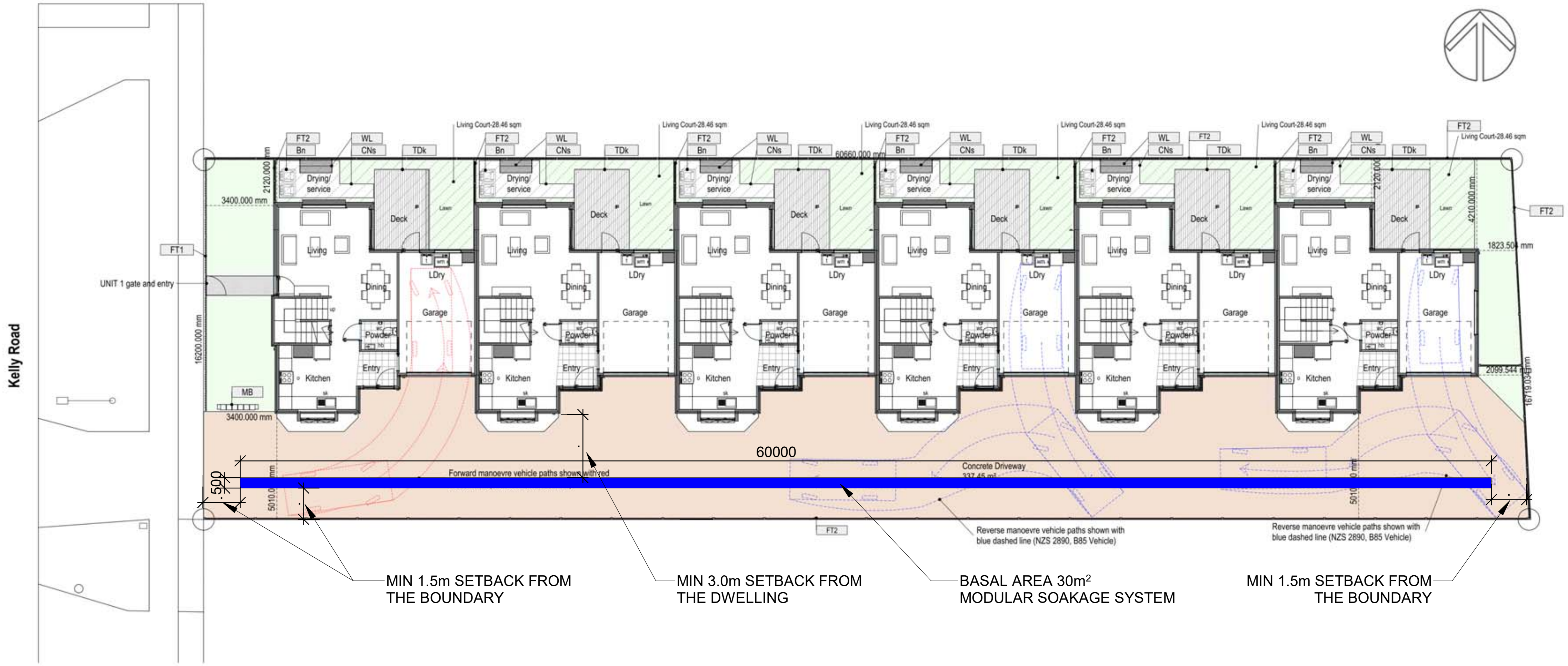
Drawing Title
GENERAL NOTES

Designed	Scale	Drawn
CH	1 : 50	CH
Date: JUNE 2023		Original Size: A3
Job No: J003406	Drawing No: 01	Rev.

100mm
50mm
10mm
0
Original Scale

C:\Users\Hrun\Dropbox (GDC)\J003406_Josh Te Weehi_3 Kelly Road, Cambridge LSW\Waters\Rev A 05.07.2023\DWGs\J003406 REV A.rvt

05/07/2023 16:40:30



STORMWATER MANAGEMENT PLAN

SCALE 1:250

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE

FOR CONSENT

Rev	Details	By	Chkd	Date

GDC Consultants Ltd
Chartered Professional Engineers & Mediators
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Address: 89 Church Road, Pukete, Hamilton 3200, New Zealand
Also at : Thames Whitianga Rotorua Napier Wellington Auckland
Web: www.gdcgroup.co.nz
TELARC REGISTERED SUPPLIER ISO 9001

Client
JOSHUA TE WEEHI

Project
PROPOSED SUBDIVISION
3 KELLY ROAD,CAMBRIDGE

Drawing Title
STORMWATER MANAGEMENT PLAN

Designed	Scale	Drawn
TM	1 : 250	TM
Date: JUNE 2023		Original Size: A3
Job No: J003406	Drawing No: 02	Rev.

APPENDIX I

Landcare Research S-map Soil Report

Manaaki Whenua
Landcare Research

S O I L R E P O R T

Environment Waikato

Otorohanga_39a.2

Report generated: 3-Sep-2021 from https://smap.landcareresearch.co.nz

Otor_39a.2 (50% of the mapunit at location (1815677, 5803670), Confidence: Medium)

This information sheet describes the typical average properties of the specified soil to a depth of 1 metre, and should not be the primary source of data when making land use decisions on individual farms and paddocks. S-map correlates soils across New Zealand. Both the old soil name and the new correlated (soil family) name are listed below.

Capture of the base soil information in this region was funded by Environment Waikato , Manaaki Whenua and MPI.

Soil Classification

Soil Classification:
Typic Orthic Allophanic Soils (LOT)

Family Name:
Otorohanga (Otor)

Sibling Name:
Otorohanga_39a.2 (Otor_39a.2)

Soil profile material
Tephric soil

Depth class (diggability)
Deep (> 1 m)

Profile texture
loam over sand

Parent Material

Stones/rocks
rhyolitic rock

Soil material
rhyolitic and andesite rock

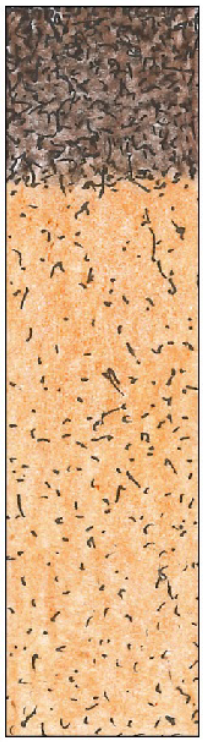
Origin
Alluvium

Soil Sibling Concept

This soil belongs to the Allophanic soil order of the New Zealand soil classification. Allophanic Soils are dominated by allophane (and also imogolite or ferrihydrite) minerals. These stiff, jelly-like minerals coat the sand and silt grains and maintain a porous, low density structure with weak strength. The soils are identified by a distinctly greasy feel when moistened and rubbed firmly between the fingers. The soil is easy to dig and samples crumble easily when crushed in the hand. It is formed in alluvial sand silt or gravel deposited by running water, from rhyolite parent material.

The topsoil typically has loam texture and is stoneless. The subsoil has dominantly sand textures, with at least 30 cm of rock fragments deposited by a volcano within 100 cm of the mineral soil depth. The plant rooting depth extends beyond 1m.

Generally the soil is well drained with very low vulnerability of water logging in non-irrigated conditions, and has high soil water holding capacity. Inherently these soils have a very low structural vulnerability and a low N leaching potential, which should be accounted for when making land management decisions.



Allan Hewitt ©

Orthic Allophanic

About this publication

- This information sheet describes the *typical average properties* of the specified soil.
- For further information on individual soils, contact Landcare Research New Zealand Ltd: www.landcareresearch.co.nz
- Advice should be sought from soil and land use experts before making decisions on individual farms and paddocks.
- The information has been derived from numerous sources. It may not be complete, correct or up to date.
- This information sheet is licensed by Landcare Research on an "as is" and "as available" basis and without any warranty of any kind, either express or implied.
- Landcare Research shall not be liable on any legal basis (including without limitation negligence) and expressly excludes all liability for loss or damage howsoever and whenever caused to a user of this factsheet.

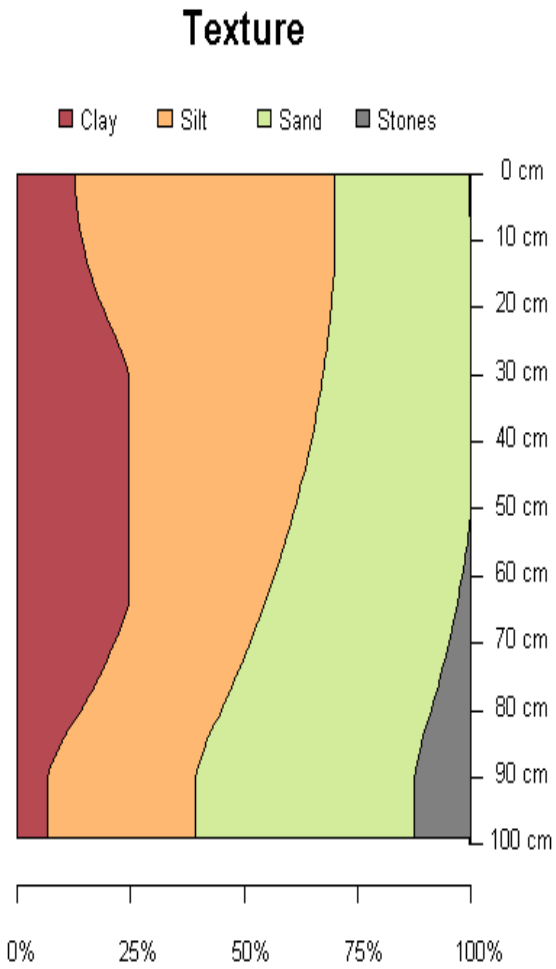
Otorohanga_39a.2

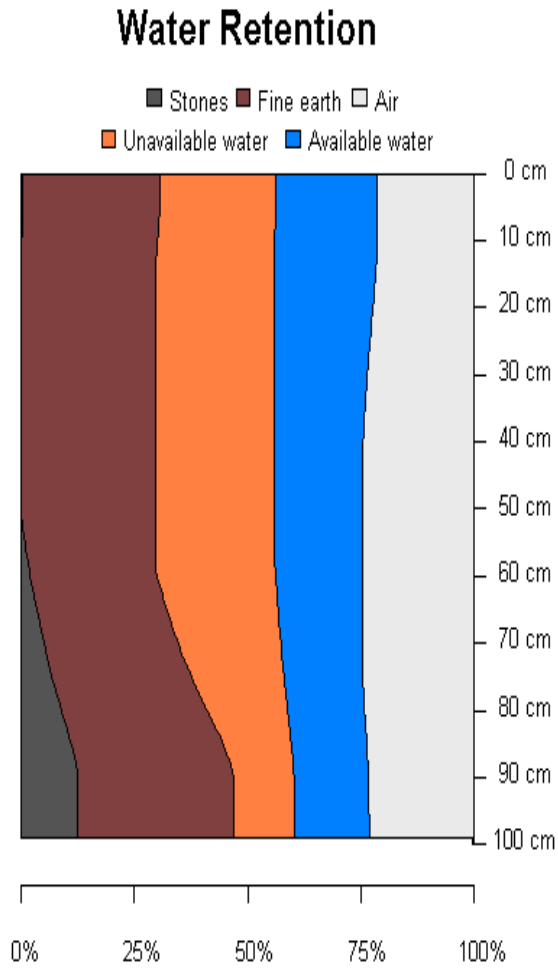
Soil horizons

Characteristics of functional horizons in order from top to base of profile:

Functional Horizon	Thickness	Stones	Clay*	Sand*	Permeability
Loamy Weak, Acidic Tephric	18 - 25 cm	0 %	12 - 18 %	25 - 35 %	rapid
Loamy Weak, Acidic Tephric	50 - 70 cm	0 - 3 %	20 - 30 %	35 - 45 %	moderate
Stony (lapilli) Sandy Loose, Acidic Tep	15 - 20 cm	5 - 20 %	3 - 12 %	45 - 65 %	rapid

* clay and sand percent values are for the mineral fines (excludes stones). Silt = 100 - (clay + sand)





The values for the graphs above have been generated from horizon and pedotransfer data. These values have then been splined to create continuous estimates of soil water holding capacity and particle size distribution the soil profile. These curves express the particle size distribution and water retention of the soil however there may be barriers to rooting depth that are not necessarily represented in these properties directly. It is advisable to check the potential rooting depth and rooting barrier fields in the soil physical properties section on page three of this factsheet.

Otorohanga_39a.2

Soil physical properties

Depth class (diggability)
Deep (> 1 m)

Potential rooting depth
Unlimited

Rooting barrier
No significant barrier within 1 m

Depth to hard rock
No hard rock within 1 m

Depth to soft rock
No soft rock within 1 m

Depth to stony layer class
No significant stony layer within

Texture profile
Loam over sand

Topsoil stoniness
Stoneless

Topsoil clay range
12 - 18 %

Drainage class
Well drained

Permeability profile
Moderate

Depth to slowly permeable horizon
No slowly permeable horizon

Permeability of slowest horizon
Moderate (4 - 72 mm/h)

Aeration in root zone
Unlimited

Profile available water

(0 - 30cm or root barrier)	(0 - 60cm or root barrier)	(0 - 100cm or root barrier)
High (65 mm)	Very high (124 mm)	High (201 mm)

Dry bulk density

topsoil	subsoil
0.91 g/cm³	0.84 g/cm³

Soil chemical properties

Topsoil P retention
High (83%)

Soil management factors

Vulnerability classes relate to soil properties only and do not take into account climate or management

Soil structure integrity

Structural vulnerability
Very low (0.29)

Pugging vulnerability
not available yet

Septic tank installation category
A1 if slope > 15 deg otherwise B3

Contaminant management

N leaching vulnerability
Low

P leaching vulnerability
not available yet

Dairy effluent (FDE) risk category
D

Water management

Water logging vulnerability
Very low

Drought vulnerability - if not irrigated
Low

Bypass flow
Low

Hydrological soil group
A

Relative Runoff Potential

Slope	0-3°	4-7°	8-15°	16-25°	>25°
Risk	VL	VL	VL	VL	L

SINDI - Soil quality Indicators

SINDI - Soil Quality Indicators

A suite of soil quality indicators is available from http://sindi.landcareresearch.co.nz/

- Compare your soil with information from our soils databases.
- Assess the intrinsic resources and biological, chemical and physical quality of your soil
- See how your soil measures up against current understanding of optimal values.
- Learn about the effect each indicator has on soil quality and some general management practices that could be implemented to improve soil quality.

Otorohanga_39a.2

Soil information for OVERSEER

The following information can be entered in the OVERSEER® Nutrient Budget model. This information is derived from the S-map soil properties which are matched to the most appropriate OVERSEER categories. Please read the notes below for further information.

Soil description page

1. Select **Link to S-map**
2. Under S-map sibling data enter the S-map name/ref: **Otor_39a.2**

Considerations when using Smap soil properties in OVERSEER

- The soil water values are estimated using a regression model based on soil order, parent rock, soil functional horizon information (stone content, soil density class), as well as texture (field estimates of sand, silt and clay percentages). The model is based on laboratory - measured water content data held in the National Soils Database and other Manaaki Whenua datasets. Most of this data comes from soils under long-term pasture and may vary from land under arable use, irrigation, etc.

- Each value is an estimate of the water content of the whole soil within the target depth range or to the depth of the root barrier (if this occurs above the base of the target depth). Where soil layers contain stones, the soil water content has been decreased according to the stone content.

- S-map only contains information on soils to a depth of 100 cm. The soil water estimates in the > 60 cm depth category assume that the bottom functional horizon that extends to 100 cm, continues down to a depth of 150cm. Where it is known by the user that there is an impermeable layer or non-fractured bedrock between 100 and 150 cm, this depth should be entered into OVERSEER. Where there is a change in the soil profile characteristics below 100 cm, the user should be aware that the values provided on this factsheet for the > 60 cm depth category will not reflect this change. For example, the presence of gravels at 120 cm would usually result in lower soil water estimates in the > 60 cm depth category. Note though that this assumption only impacts on a cropping block, as OVERSEER uses soil data from just the top 60 cm in pastoral blocks.

- OVERSEER requires the soil water values to be non-zero integers (even though zero is a valid value below a root barrier), and the wilting point value must be less than the field capacity value which must be less than the saturation value. The S-map water content estimates supplied by the S-map web service have been rounded to integers and may be assigned minimal values to meet these OVERSEER requirements. These modifications will result in a slightly less accurate estimate of Available Water to 60 cm (labelled PAW in OVERSEER) than that provided on the first page of this factsheet, but this is not expected to lead to any significant difference in outputs from OVERSEER .

Manaaki Whenua
Landcare Research

Environment Waikato
REGIONAL COUNCIL

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

GEOTECHNICAL ASSESSMENT REPORT
Proposed Buildings
LOT 5 DPS 1176
3 Kelly Road, Cambridge

- **Geotechnical Investigation & Design**
- **Structural and Civil Design**
- **Earthquake Engineering and Assessments**
- **Traffic and Safety Assessments**
- **Road Design and Asset Management**
- **Water/Wastewater/Stormwater Design and Modelling**
- **Project and Construction Management**
- **Mediation**
- **Training**

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Quality ISO 9001

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Whitianga
07 869 0640
Whitianga@gdcgroup.co.nz

Proposed Buildings
July 2023

This report has been prepared for Joshua Te Weehi by GDC Consultants Ltd (GDC). No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other parties.

This disclaimer shall apply notwithstanding that the report may be made available to other persons for an application for permission or approval to fulfil a legal requirement

Revision	A (Section 1.2, Appendix F)
Status	For Consent

Quality Assurance Statement		
Task	**Responsibility**	**Signature**
Prepared by:	John Kim BE (Civil), MEng (Civil) Dulan Gallege BSc. (Civil-Hons)	P.P 04-04-22
Reviewed by:	Nigel Ross BSc. (Civil) Hons, CMEngNZ	5/4/22
Approved by:	Clement Fernando CPEng. No. 202146	5/4/2022

Prepared by:

GDC Consultants Ltd
89 Church Road
Hamilton 3200
New Zealand

Telephone: 07 838 0090
Email: Hamilton@gdcgroup.co.nz

File No: J003406_Rev A

Table of Contents

1.0 INTRODUCTION

1.1 Project Details

Client's Name	Joshua Te Weehi
Site Address	3 Kelly Road Cambridge
Legal Description	LOT 5 DPS 1176

1.2 Background

The Client has engaged GDC Consultants Ltd to undertake a geotechnical investigation for proposed buildings. The site is occupied by an existing dwelling and two small buildings. The proposed residential development will include six units of buildings. Each building is consisting with a garage and outdoor living area. Total floor area of each building is about 73m^2 according to plans provided by client. Refer to Appendix F for provided plans.

This report presents the results of the geotechnical investigation for the proposed buildings.

1.3 Scope

This report undertakes to:

- Assess soil conditions to allow recommendations on foundation types
- Identify hazards associated with the site
- Review available geotechnical report and data
- Assess desktop liquefaction potential

This report does not include the following:

- Contamination assessment
- Stormwater assessment
- Wastewater assessment

The findings of this report will be used to support any resource consent application for the buildings proposed in the brief.

2.0 SITE ASSESSMENT

2.1 General Site Description

The site is located approximately 72m northeast of the intersection of Kelly Road and Cambridge Road. Access to the property is via Kelly Road. The Waikato River runs approximately 760m south of the site, while Te Koutu Lake is located approximately 1400m to the east. The site was grassed at the time of our investigations.

The property is in a residential area with total lot area of 1019m². The property is located within the Waipa District Council jurisdiction. A site location plan is given in Appendix A.

The site investigation was carried out on the new buildings locations from the drawings provided by the client.

2.2 Topography

The site and surrounding areas are relatively on flat ground.

2.3 Hazards on Site

Flooding

The site is not located within known Flood Hazard Zone, as indicated by the Flood Hazard Map prepared by Waikato Regional Council. Refer to Appendix B for the Flood Hazard Map.

Determination of finished floor level does not form part of this report.

Erosion, Subsidence, Slippage

At the time of onsite investigation, there was no visual evidence of erosion, subsidence or slippage observed.

3.0 GEOTECHNICAL INVESTIGATIONS

3.1 Field Investigations

Investigations undertaken by GDC Consultants on 2nd September 2021 included the drilling of five (5) 50mm diameter hand augered boreholes to verify the near surface soils.

Soil testing included Scala Penetrometer tests adjacent to the boreholes. Descriptions of materials encountered within the boreholes are presented within the appended logs.

The hand augered boreholes were logged in accordance with the procedures in the New Zealand Geotechnical Society 'Guidelines for the Field Classification and Engineering Description of Soil and Rock for Engineering Purposes' (2005).

3.2 Review of Relevant Geotechnical Information

GDC Consultants has reviewed the following available geotechnical information:

Reviewed Information	Key Observations
Geotechnical Investigation Report (1905-1907 Cambridge Rd, Aug 2020, GDC Consultants)	• Late Pleistocene River Deposits (Hinuera Formation) • Silty SAND and SAND Subsoils • No Groundwater was encountered up to 10m bgl • Liquefaction likelihood – "Unlikely" • No soft/compressible material observed
Geotechnical Investigation Report (1913 Cambridge Rd, Oct 2019, GDC Consultants)	• Late Pleistocene River Deposits (Hinuera Formation) • Silty SAND and SAND Subsoils • No Groundwater was encountered up to 10m bgl • Liquefaction likelihood – "Unlikely" • Low risk of static settlement expected

Table 1 - Reviewed Geotechnical Information

4.0 GEOLOGY & SUBSOIL

4.1 Geology

The geology of the site as shown in the GNS Science (2014) online map (Scale 1:250K) shows that the area comprises of Late Pleistocene river deposits which is described as "Cross-bedded pumice sand, silt and gravel with interbedded peat".

Cambridge region lies within the broad alluvial floodplain known as Waikato Basin (Edbrooke, 2005).

The Waikato Basin can be in general split into two terranes comprising the Hamilton Hills and Lowlands as described in McCraw (2011). The Lowlands are the valleys between the Hamilton Hills infilled with younger alluvial sediments of the Piako Subgroup, including the Hinuera Formation (late Pleistocene, 24,000 to 14,000 years). The Hinuera Formation surface typically forms the gently sloping topographic surface of the Lowlands observed in the Cambridge CBD.

4.2 Soil Conditions

Field investigations were conducted using hand dug boreholes and Scala Penetrometer tests on site. The locations of the boreholes are shown on the Site Investigation Plan in Appendix C. During the field investigation, visual and physical examination of the soils observed on site were recorded in the borehole logs in Appendix D.

In general, the site is covered with TOPSOIL to a depth of about 0.3m. Below this top layer, loose silty SAND was found until 2.0m depth underlying by loose to medium

dense silty SAND until 2.6m. This is then followed by medium dense fine SAND until the end of the hand dug boreholes at 3.0m depth.

Groundwater was not encountered in any of the boreholes; However, we expect the permanent groundwater table to lie several metres below the surface of the subject site based on the elevation of the site relative to the surrounding watercourses.

A summary of field testing is given in Table 2. Detailed descriptions of the soil layers encountered during the investigation are given within the appendices.

Soil Description	Depth (m)	Thickness (m)	Scala Blow Count per 100mm	Ultimate Bearing Capacity at depth[2]
TOPSOIL	0 – 0.3	0.3	-	N/A
Loose silty SAND	0.3 – 2.0	1.7	1 - 4	150 kPa
Loose to medium dense silty SAND	2.0 – 2.6	0.6	2 - 6	195 kPa
Medium dense fine SAND	2.6 – 3.0	0.4	> 4	> 240 kPa

Table 2 – Summary of ground conditions encountered from testing[1]

(1) This table provides only a summary of subsoil conditions. Any geotechnical design should be based on the complete bore logs given within the appendices.

(2) The Ultimate Bearing Capacity is the maximum pressure that a foundation soil can withstand without undergoing shear failure. It should be noted that the following bearing capacities are based on M.J.Stockwell(1977) research paper without any modified bearing capacity consideration.

We have examined nearby CPT data carried out at 1905-1907 Cambridge Road, Cambridge. Silty SAND and Sandy SILT subsoils were described up to the target depth of 10m below ground level. No noticeable soft or compressible materials were detected. Refer to Appendix E for the CPT results of 1905-1907 Cambridge Road.

4.3 Liquefaction Assessment

Based on our findings during the investigation and local knowledge of the geology we consider the potential liquefaction of the underlying soils to be of low risk.

We believe groundwater to be of the order of 10m or more below ground level, giving a significant thickness ‘crust’ of non-liquefiable deposits. This crust will protect the site and structure from surface manifestations of liquefaction such as sand boils and fissures and should mitigate against differential settlement induced by liquefaction of deeper strata.

5.0 ENGINEERING CONSIDERATIONS

5.1 Recommended Foundation System

From the results of the Hand drilled Boreholes and Scala Penetrometer tests, with consideration to the type of soils present on-site, ultimate bearing capacities for the shallow founded structures can be inferred for this site

Founding soils do not comply with the requirements of NZS 3604:2011 Timber Framed buildings for “good ground" with an ultimate bearing capacity of 300kPa.

For purposes of engineering calculations, the site subsoil class is taken as Class D in accordance with New Zealand Standard NZS 1170.5:2004. The following is considered to be the most appropriate foundation option for the buildings. It should be noted that the following recommendation is based on the limited geotechnical investigation results to support a resource consent application. Therefore, this needs to be verified and reviewed with further investigation at a building consent stage:

For Buildings on Concrete Floor:
Engineer Designed Raft Foundation

The proposed buildings need to be supported by engineer designed raft foundations to an allowable bearing capacity of 50kPa.

An Engineer qualified in foundation design and familiar with this report shall check the foundation design to account for the ground conditions and loadings from the proposed new buildings.

All top-soils, organic materials, uncontrolled fill materials, and unsuitable insitu materials under the building platform must be removed to a minimum depth of 0.5m and replaced with selected and compacted granular fill to provide a solid basecourse for the building slab. It is recommended that excavations be extended 1m beyond the perimeter of the building platform to ensure sufficient compaction is achieved beneath the building platform.

- Approved fill material shall be placed and compacted in layers no greater than 150mm thick in accordance with NZS 3604:2011.

A geotechnical engineer should be engaged to inspect the dig-out stage for the sub-grade check.

5.2 Site Stability

The site and surrounding areas are generally on flat ground. Therefore, there is no identified site stability risk at this stage.

5.3 Retaining Structures

The site is not likely to require retaining structures to provide the required building platform. However, a qualified Engineer experienced in geomechanics and familiar with this report should be engaged to design any retaining wall structures higher than 1.5m on this property.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our investigations we make the following conclusions and recommendations:

a) Soil testing has been undertaken in reference to the proposed buildings as indicated on the site plan provided to GDC Consultants Ltd. Further geotechnical investigations should be carried out if the location of the buildings are changed from that indicated.

b) Foundations in accordance with Section 5.1 of this report.

c) The Client shall contact the local authority regarding the consideration of a finished floor level. Unless defined by the Territorial Authority, suspended floors and slabs on ground shall be at least 150 mm above the finished level of the surrounding ground in order to comply with E1/AS1 of the Approved Document for New Zealand Building Code “Surface water, resulting from an event having a 2% probability of occurring annually shall not enter buildings”.

d) An Engineer should inspect the building platform construction and foundation and slab construction prior to the concrete pour, to ensure that the design criteria have been met. Producer Statements PS4 – Construction Review should be issued for these inspections.

e) All stormwater collected from roofed and paved surfaces shall be controlled and piped according to the local authority regulations.

f) All wastewater shall be controlled and piped according to the local authority regulations.

7.0 LIMITATIONS

This report has been prepared for Joshua Te Weehi as our Client in accordance with the agreed scope of services. The reliance by other parties on this document shall without our prior agreement in writing be at such parties' sole risk.

The observations noted in the investigations have been extrapolated between the various test locations to infer probable site conditions. It is noted that these inferences in no way guarantee the validity of these assumptions due to the potential variability of the site soils.

Recommendations and opinions in this report are based on data obtained from the investigations and site observations as detailed in this report. The nature and continuity of subsoil conditions at locations other than the investigation bore and tests are inferred, and it should be appreciated that actual conditions could vary from the assumed model. If ground conditions are found to vary from that described or assumed, the matter should in the first instance be referred back to GDC for comment.

Please contact any of the signatories for further information. If there are any questions arising from the above or during construction, please call this office.

This report shall not be used to interpret any form of financial transaction.

Contamination, wastewater and stormwater assessments are outside of the scope of this report.

8.0 REFERENCES

GNS Science (2014), *New Zealand Geology Web Map, accessed on 3rd September 2021, <http://data.gns.cri.nz/geology/>.*

New Zealand Geotechnical Society (2005), *Guidelines for the Field Classification and Description of Soil and Rock for Engineering Purposes (pp. 38).*

Stockwell, M.J. (1977), *Determination of allowable bearing pressure under small structures*. New Zealand Engineering (June 1977), Vol. 32, No.6 (pp. 18 – 21).

Waipa District Council, IntraMaps, accessed on *3rd September 2021*, < https://www.waipadc.govt.nz/our-services/mapsonline/>.

Waikato Regional Council, accessed on *3rd September 2021*, <https://waikatomaps.waikatoregion.govt.nz/>

Geotechnical Investigation Report (1905-1907 Cambridge Rd, Aug 2020, GDC Consultants)

Geotechnical Investigation Report (1913 Cambridge Rd, Oct 2019, GDC Consultants)

APPENDIX A

Site Location Plan

Site Location Map

Print Date: 2/09/2021
Print Time: 9:53 PM

Scale: 1:822

Original Sheet Size A4

Projection: NZGD2000 / New Zealand Transverse Mercator 2000
Bounds: 1815611.51157676,5803541.08990089
1815800.39697004,5803776.17747671

Appendix B

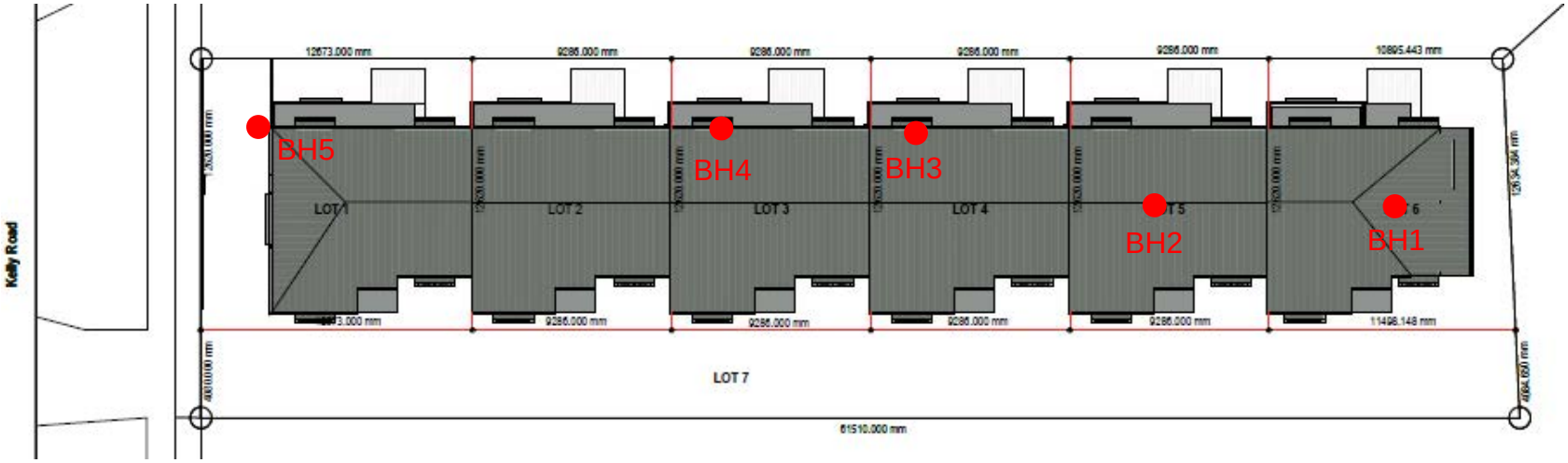
Flood Hazard Map

Appendix C

Site Investigation Plan

GDC Consultants Ltd

Site Investigation Plan April 2022 Job: J003406



APPENDIX D

Scala Penetrometer Test Results and Hand Augered Borehole Logs: BH1 – BH5

BORE HOLE LOG BH1

Job No.	J003406		
Project	Geotechnical Investigation of Proposed Buildings - 3 Kelly Road, Cambridge		
Client	Joshua Te Weehi		
Borehole Location	See site plan		
Surface Elevation	Flat	Datum	
Surface Condition	Grassed		

Fill **Topsoil** **Sand** **Clay** **Silt** **Pea** **Gravel**

Depth mm	G.W.L	Graphic Log	Field Description	Vane Shear Strength (kPa) Corrected (Per NZGS guideline) 25 50 75 100 125 150 175	Scala Penetrometer (blows/ 100 mm) 3 6 9 12 15
300			TOPSOIL		
600			Silty SAND;brown,moist,loose and low plastic		
900			Coarse SAND;brown,moist and loose to medium dense		
1200					
1500					
1800					
2100					
2400					
2700			SILT;white,wet,firm and plastic		
3000			Fine SAND;white,wet and medium dense E.O.B @ 3.0m , No GWL		

Drill Method	50mm hand auger
Date Drilled	2/9/2021
Drilled by	JC
Shear Vane No	

NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Test Methods	Tests
Field Description of Soil and Rock, NZ Geotechnical Soc., 2005	In situ shear vane reading
Guideline for Hand Held Shear Vane Test, NZ Geotechnical Soc., 2001	Remoulded shear vane reading
	Scala Penetrometer
	UTP - Unable To Penetrate

BORE HOLE LOG BH2

Job No.	J003406		
Project	Geotechnical Investigation of Proposed Buildings - 3 Kelly Road, Cambridge		
Client	Joshua Te Weehi		
Borehole Location	See site plan		
Surface Elevation	Flat	Datum	
Surface Condition	Grassed		

Fill **Topsoil** **Sand** **Clay** **Silt** **Pea** **Gravel**

Depth mm	G.W.L	Graphic Log	Field Description	Vane Shear Strength (kPa) Corrected (Per NZGS guideline) 25 50 75 100 125 150 175	Scala Penetrometer (blows/ 100 mm) 3 6 9 12 15
300			TOPSOIL		
600			Silty SAND;brown,moist,loose and low plastic		
900			Coarse SAND;brown,moist and loose to medium dense		
1200					
1500					
1800					
2100					
2400			SILT;white,wet,stiff and plastic		
2700			Fine SAND;white,wet and medium dense		
3000			SILT;white,wet,firm and plastic E.O.B @ 3.0m , No GWL		

Drill Method	50mm hand auger
Date Drilled	2/9/2021
Drilled by	JC
Shear Vane No	

NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Test Methods	Tests
Field Description of Soil and Rock, NZ Geotechnical Soc., 2005	In situ shear vane reading
Guideline for Hand Held Shear Vane Test, NZ Geotechnical Soc., 2001	Remoulded shear vane reading
	Scala Penetrometer
	UTP - Unable To Penetrate

BORE HOLE LOG BH3

Job No.	J003406		
Project	Geotechnical Investigation of Proposed Buildings - 3 Kelly Road, Cambridge		
Client	Joshua Te Weehi		
Borehole Location	See site plan		
Surface Elevation	Flat	Datum	
Surface Condition	Grassed		

Fill | Topsoil | Sand | Clay | Silt | Pea | Gravel

Depth mm	G.W.L	Graphic Log	Field Description
300			TOPSOIL
600			SILT with trace of sand;black,moist,loose and low plasti
900			Silty SAND;brown,moist,loose and low plastic
1200			Coarse SAND;brown,moist and loose to medium dense
1500			
1800			
2100			SILT;white,wet,stiff and plastic
2400			Fine SAND;white,wet and medium dense
2700			SILT;white,wet,stiff and plastic
3000			Fine SAND;white,wet and medium dense E.O.B @ 3.0m , No GWL

Vane Shear Strength (kPa) Corrected (Per NZGS guideline)
25 50 75 100 125 150 175

Scala Penetrometer (blows/ 100 mm)
3 6 9 12 15

Drill Method	50mm hand auger
Date Drilled	2/9/2021
Drilled by	JC
Shear Vane No	

NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Test Methods
Field Description of Soil and Rock, NZ Geotechnical Soc., 2005
Guideline for Hand Held Shear Vane Test, NZ Geotechnical Soc., 2001

Tests
In situ shear vane reading
Remoulded shear vane reading
Scala Penetrometer
UTP - Unable To Penetrate

BORE HOLE LOG BH4

Job No.	J003406		
Project	Geotechnical Investigation of Proposed Buildings - 3 Kelly Road, Cambridge		
Client	Joshua Te Weehi		
Borehole Location	See site plan		
Surface Elevation	Flat	Datum	
Surface Condition	Grassed		

Fill | Topsoil | Sand | Clay | Silt | Pea | Gravel

Depth mm	G.W.L	Graphic Log	Field Description
300			TOPSOIL
600			SILT with trace of sand;black,moist,loose and low plasti
900			Silty SAND;brown,moist,loose and low plastic
1200			Coarse SAND;brown,moist and loose to medium dense
1500			
1800			Fine SAND;brown,loose and moist
2100			SILT;white,wet,stiff and plastic
2400			Fine SAND;white,wet and medium dense
2700			SILT;white,wet,stiff and plastic
3000			Fine SAND;white,wet and medium dense E.O.B @ 3.0m , No GWL

Vane Shear Strength (kPa) Corrected (Per NZGS guideline)
25 50 75 100 125 150 175

Scala Penetrometer (blows/ 100 mm)
3 6 9 12 15

Drill Method	50mm hand auger
Date Drilled	2/9/2021
Drilled by	JC
Shear Vane No	

NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

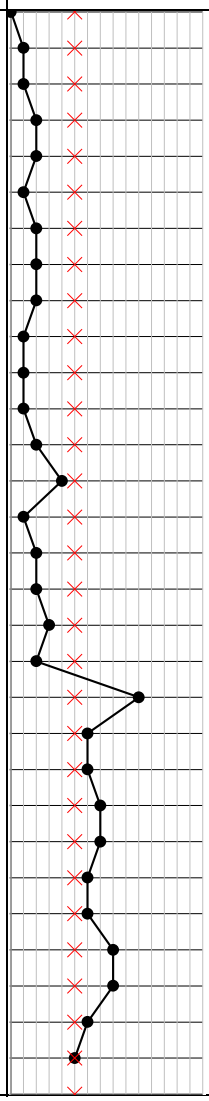
Test Methods	Tests
Field Description of Soil and Rock, NZ Geotechnical Soc., 2005	In situ shear vane reading
	Remoulded shear vane reading
Guideline for Hand Held Shear Vane Test, NZ Geotechnical Soc., 2001	Scala Penetrometer
	UTP - Unable To Penetrate

BORE HOLE LOG BH5

Job No.	J003406		
Project	Geotechnical Investigation of Proposed Buildings - 3 Kelly Road, Cambridge		
Client	Joshua Te Weehi		
Borehole Location	See site plan		
Surface Elevation	Flat	Datum	
Surface Condition	Grassed		

Fill | Topsoil | Sand | Clay | Silt | Peat | Gravel

Depth mm	G.W.L	Graphic Log	Field Description	Vane Shear Strength (kPa) Corrected (Per NZGS guideline) 25 50 75 100 125 150 175	Scala Penetrometer (blows/ 100 mm) 3 6 9 12 15
300			TOPSOIL		
600			Silty SAND;brown,moist,loose and low plastic		
900					
1200					
1500			Coarse SAND;brown,moist and loose to medium dense		
1800					
2100			SILT;white,wet,stiff and plastic		
2400			Fine SAND;white,wet and medium dense		
2700					
3000			SILT;white,wet,firm and plastic E.O.B @ 3.0m , No GWL		



Drill Method	50mm hand auger
Date Drilled	2/9/2021
Drilled by	JC
Shear Vane No	

NOTE : The subsurface data described above has been determined at this specific borehole location. Such data will not identify any variations away from this location

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

Test Methods	Tests
Field Description of Soil and Rock, NZ Geotechnical Soc., 2005	In situ shear vane reading
	Remoulded shear vane reading
Guideline for Hand Held Shear Vane Test, NZ Geotechnical Soc., 2001	Scala Penetrometer
	UTP - Unable To Penetrate

APPENDIX E

CPT Results (1905-1907 Cambridge Road, Cambridge)

Topdrill Geotech
IN-SITU TESTING NZ

CPT: CPT01

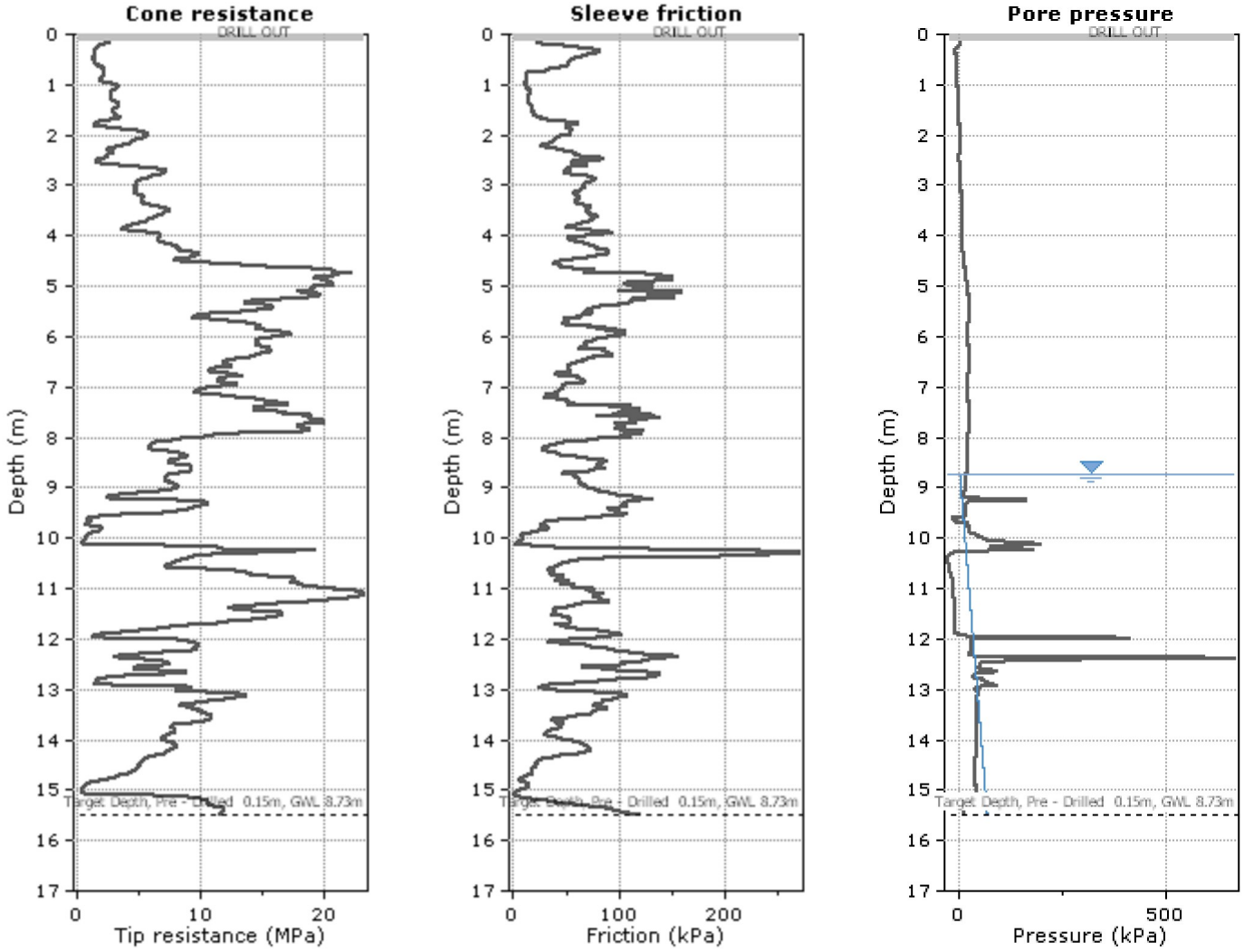
Total depth: 15.50 m, Date: 5/08/2020

Coords: NZTM | E1815732, N5803613

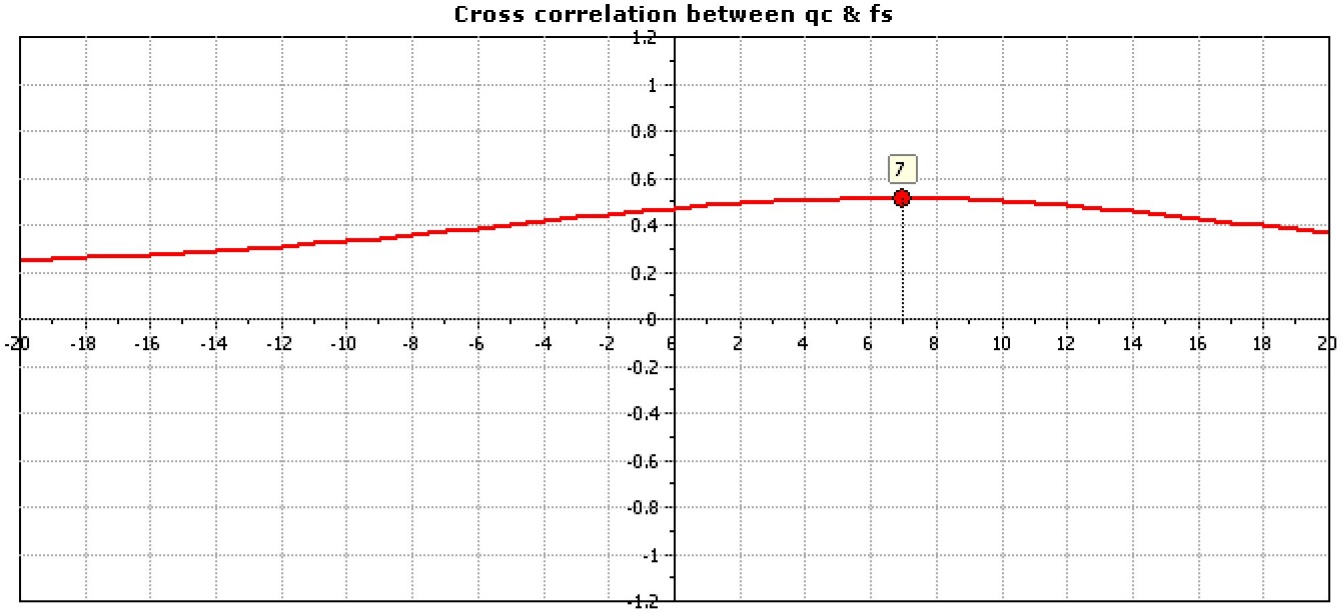
Cone Type: 10cm² MKj633

Project: **GDC Consultants | Site Investigations**

Location: **1907 Cambridge Road, Cambridge**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Topdrill Geotech
IN-SITU TESTING NZ

CPT: CPT01

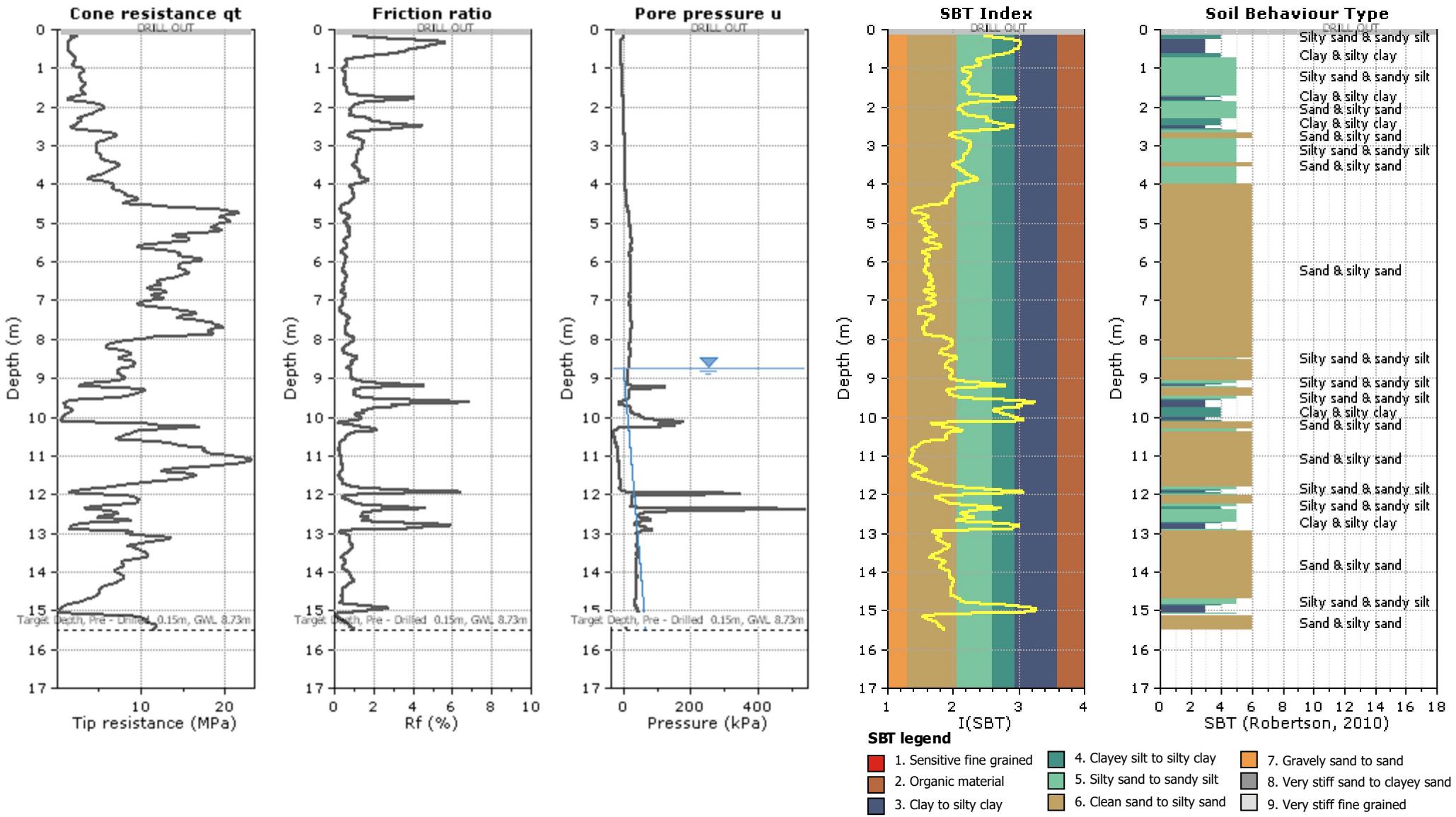
Total depth: 15.50 m, Date: 5/08/2020

Coords: NZTM | E1815732, N5803613

Cone Type: 10cm² MKj633

Project: **GDC Consultants | Site Investigations**

Location: **1907 Cambridge Road, Cambridge**



Topdrill Geotech
IN-SITU TESTING NZ

CPT: CPT02

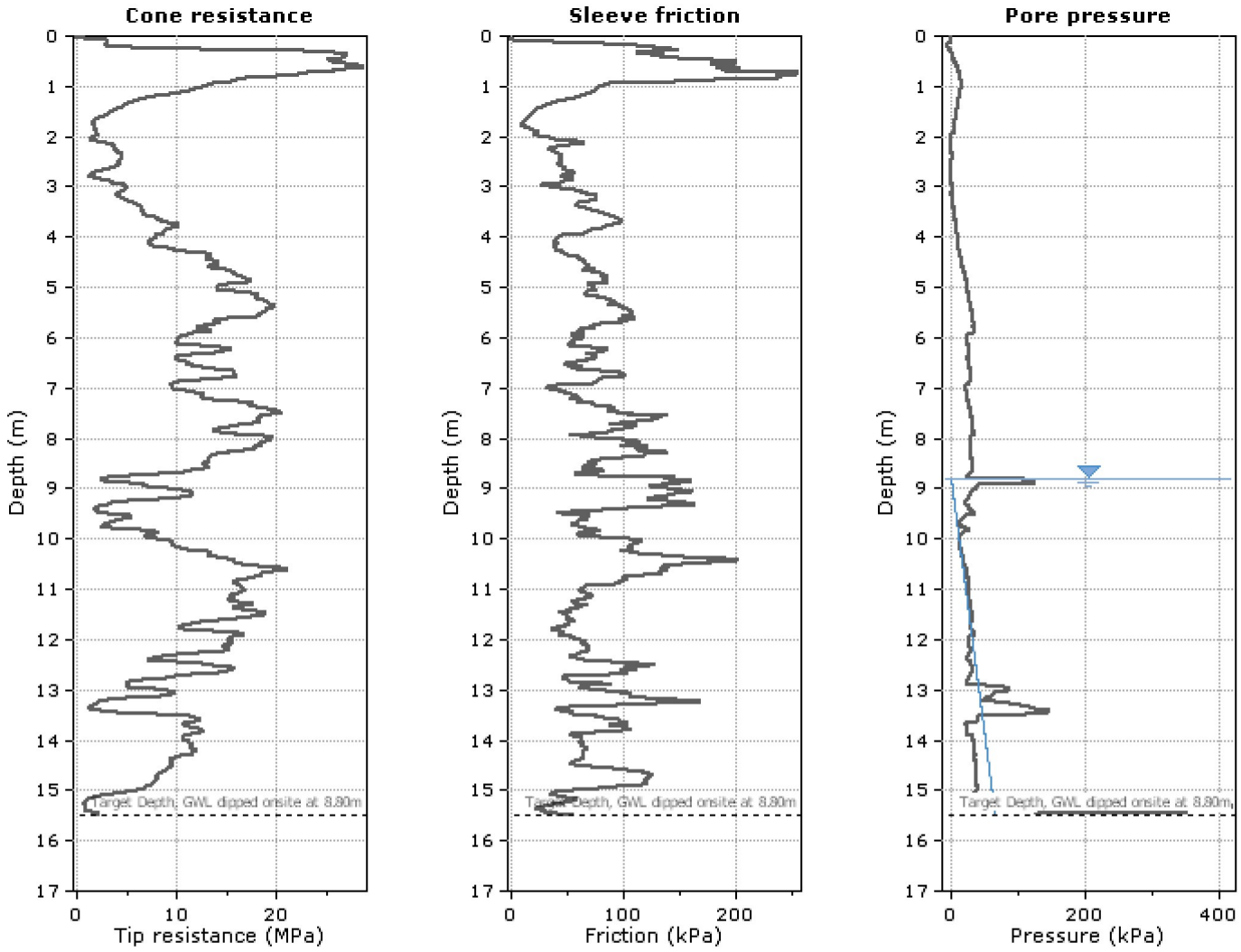
Total depth: 15.50 m, Date: 5/08/2020

Coords: NZTM | E1815719, N5803646

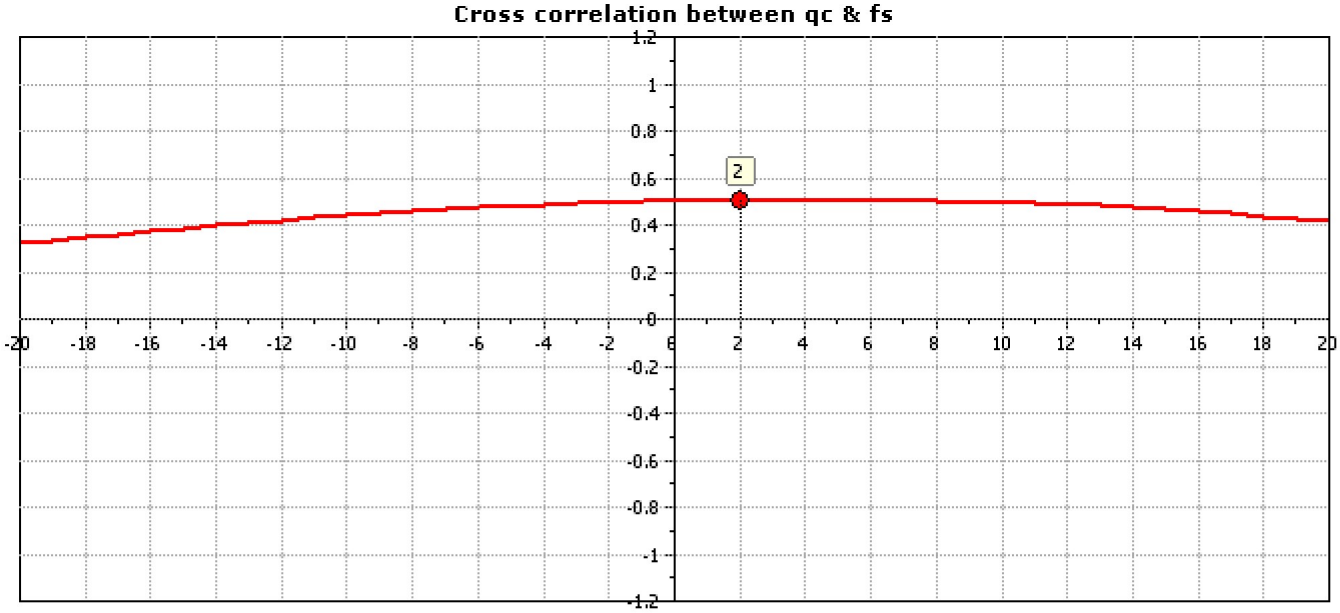
Cone Type: 10cm² MKj633

Project: **GDC Consultants | Site Investigations**

Location: **1907 Cambridge Road, Cambridge**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Topdrill Geotech
IN-SITU TESTING NZ

CPT: CPT02

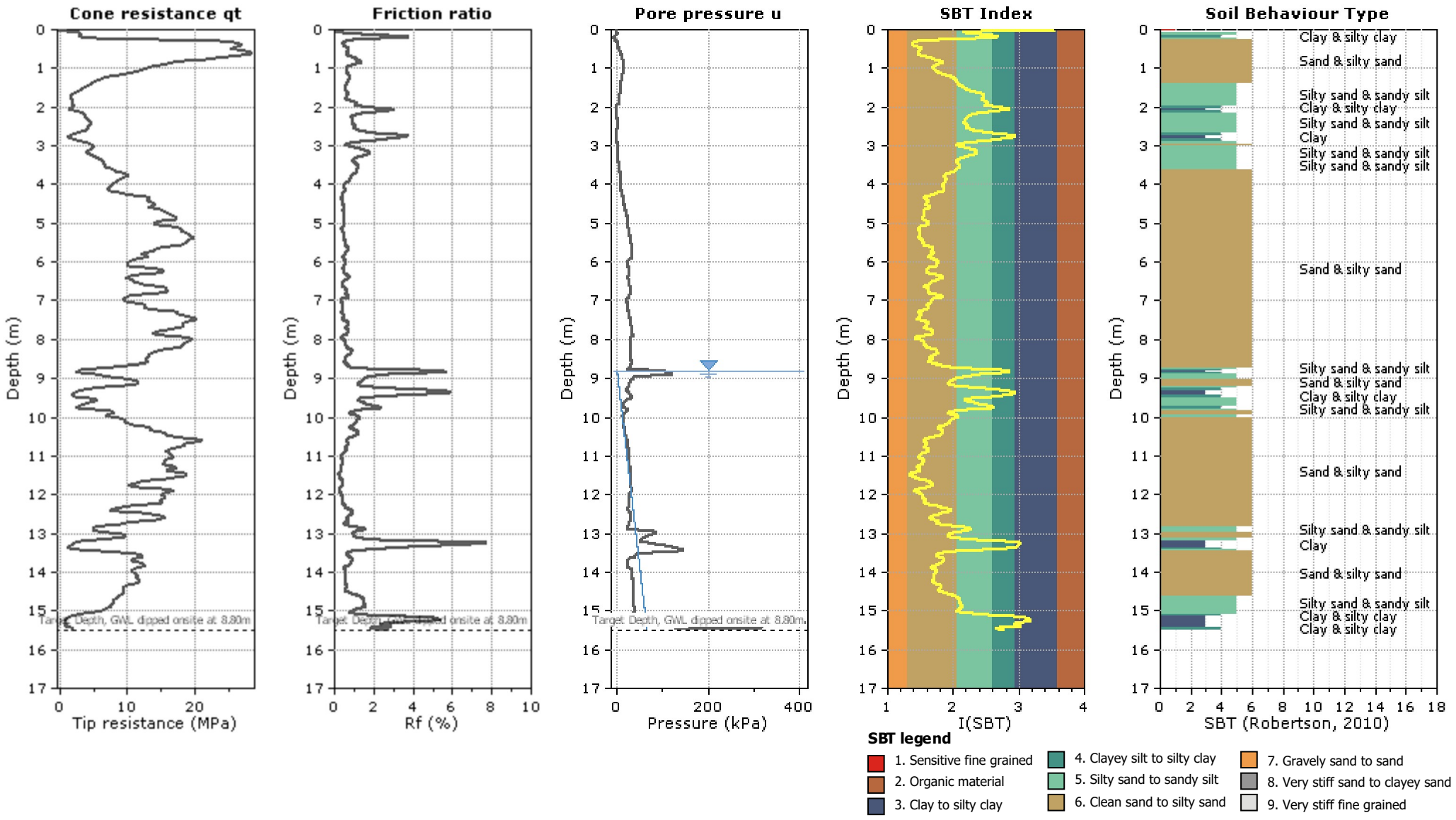
Total depth: 15.50 m, Date: 5/08/2020

Coords: NZTM | E1815719, N5803646

Cone Type: 10cm² MKj633

Project: **GDC Consultants | Site Investigations**

Location: **1907 Cambridge Road, Cambridge**



Topdrill Geotech
IN-SITU TESTING NZ

CPT: CPT03

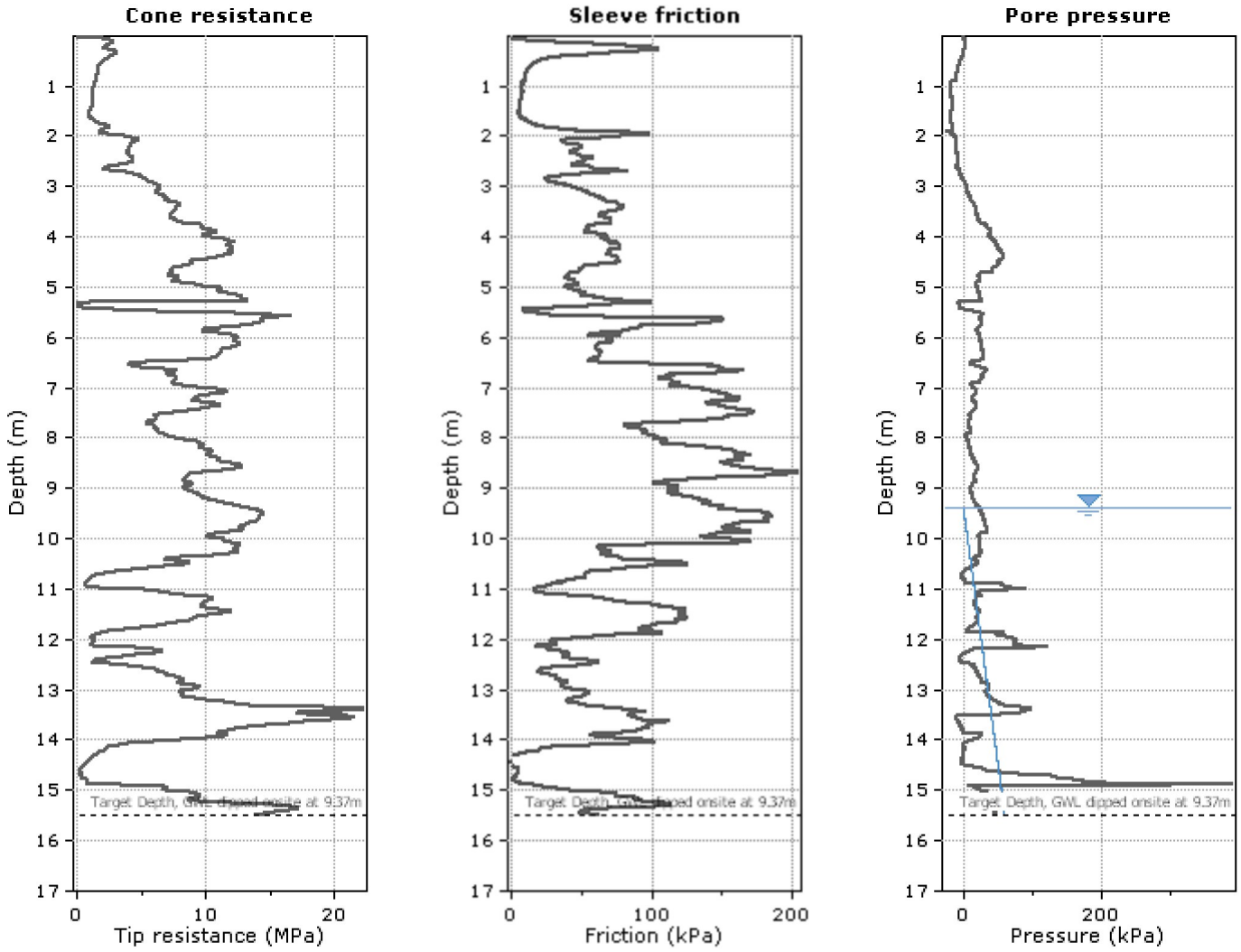
Total depth: 15.50 m, Date: 5/08/2020

Coords: NZTM | E1815748, N5803672

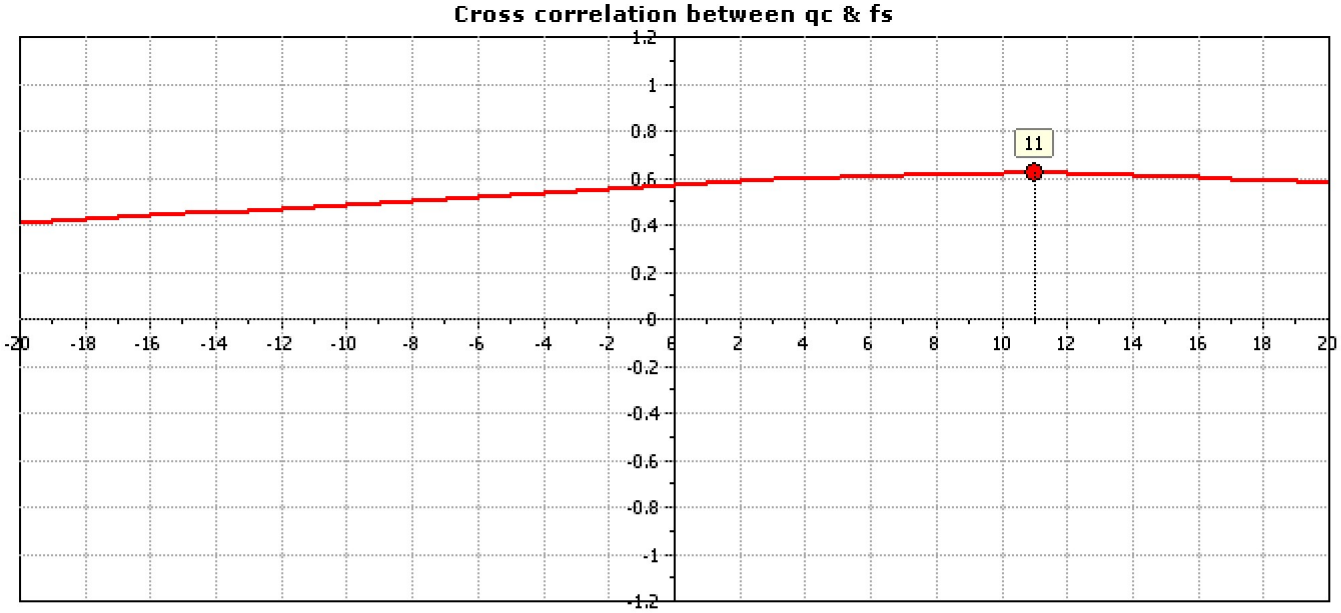
Cone Type: 10cm² MKj633

Project: GDC Consultants | Site Investigations

Location: 1907 Cambridge Road, Cambridge



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Topdrill Geotech
IN-SITU TESTING NZ

CPT: CPT03

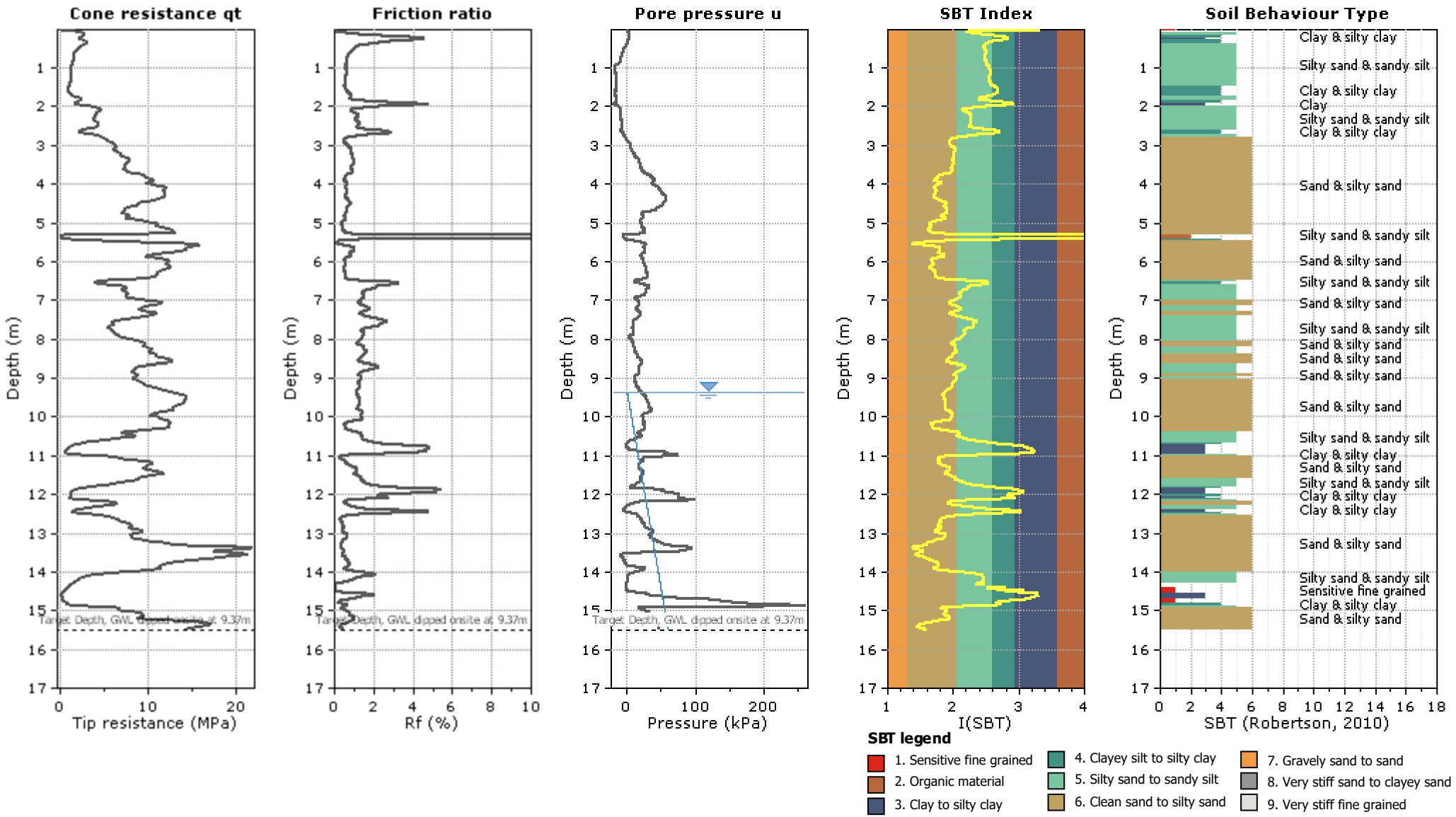
Total depth: 15.50 m, Date: 5/08/2020

Coords: NZTM | E1815748, N5803672

Cone Type: 10cm² MKj633

Project: **GDC Consultants | Site Investigations**

Location: **1907 Cambridge Road, Cambridge**



APPENDIX F

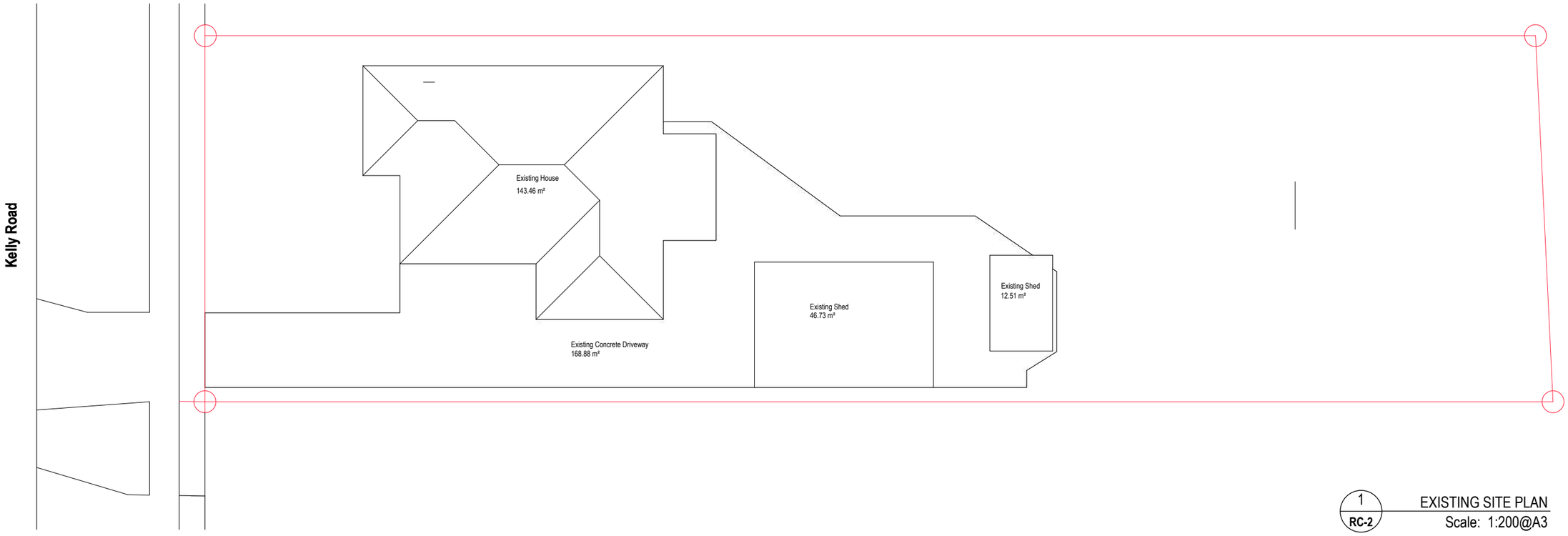
Concept Plans

Resource Consent Drawings

Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	COVER PAGE	RC	**RC-1**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	EXISTING SITE PLAN	RC	**RC-2**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN SITE PLAN GL	RC	**RC-3**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LOT PLAN	RC	**RC-4**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PERMERABLE AREA CALCULATION	RC	**RC-5**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LANDSCAPE PLAN	RC	**RC-6**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN L1	RC	**RC-7**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	ELEVATIONS	RC	**RC-8**

Kelly Road Residential Development
Cambridge for
SLOANE STREET LTD

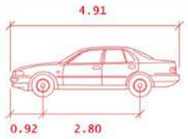
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	COVER PAGE	RC	**RC-1**



1
RC-2

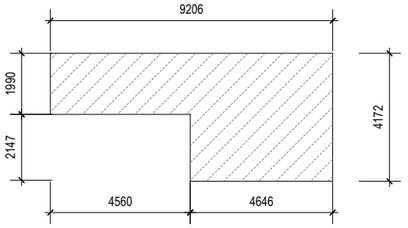
EXISTING SITE PLAN
Scale: 1:200@A3

Project: PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	Client: SLOANE STREET LTD	Documentation: Documentation Date July 5, 2023; Documentation Phase Concept Design	Drawing Information: Approved Stan K; Checked SK; Dwg Scale as shown; Drawn SK	Project No 22002	This drawing is confidential and shall only be used for the purposes of this project. © Copyright SEKTA Architects Ltd, 2012.	P +64 7 853 2204; F +64 7 853 2201; W www.sekta.co.nz; M PO Box 12029 Chartwell Ham.					
		Date	Revision	Revision Description	SC REF	Drawing		Phase	Drawing No		
		Wednesday, July 05, 2023	1	Resource Consent Issue	SC10	EXISTING SITE PLAN		RC	RC-2		

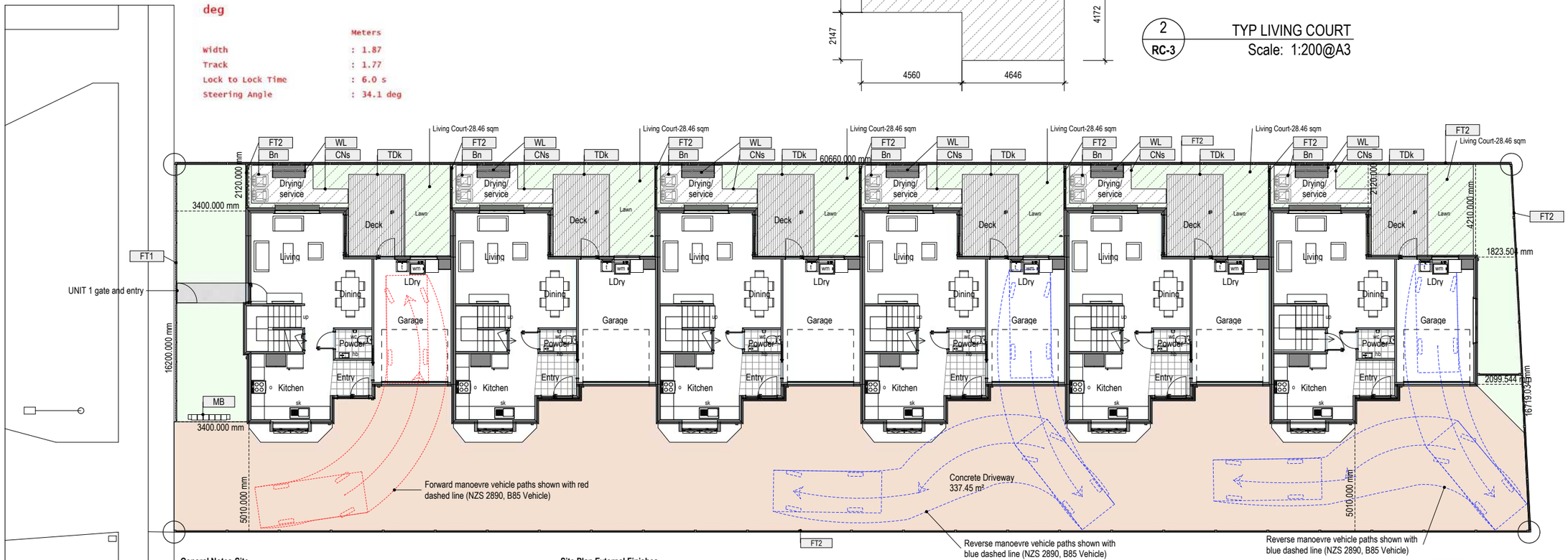


deg

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0 s
Steering Angle	: 34.1 deg



2 RC-3 TYP LIVING COURT
Scale: 1:200@A3



1 RC-3 SITE PLAN GL PLAN
Scale: 1:200@A3

General Notes-Site

Site Area	1019 sqm
Site Address	3 Kelly Road, Cambridge
Legal Description	LOT 5 Deposited Plan South Auckland 1176
EXISTING GFA ON SITE	
Existing House	144
Existing Sheds	58
Concrete Driveway	169
Total Existing GFA on Site	**371**
NEW BUILDING	
Unit 1	
GFA GL	73.12
GFA L1	66.16
Unit 2	
GFA GL	73.12
GFA L1	66.24
Unit 3	
GFA GL	73.12
GFA L1	66.24
Unit 4	
GFA GL	73.12
GFA L1	66.24
Unit 5	
GFA GL	73.12
GFA L1	66.24
Unit 6	
GFA GL	73.12
GFA L1	66.24
Total GFA	**836.08**
Territorial Authority	Waipa District Council
Wind Zone	Zone A
Earthquake Zone	Zone 1
Cliamte Zone	Zone 2
Exposure Zone	Zone B
Boundary Information	Survey and site info shown on architectural drawings is for information only.
Landscaping	Refer Landscaping Plan

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

2 RC-3 SITE LOCALITY PLAN
Scale: 1:3500@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

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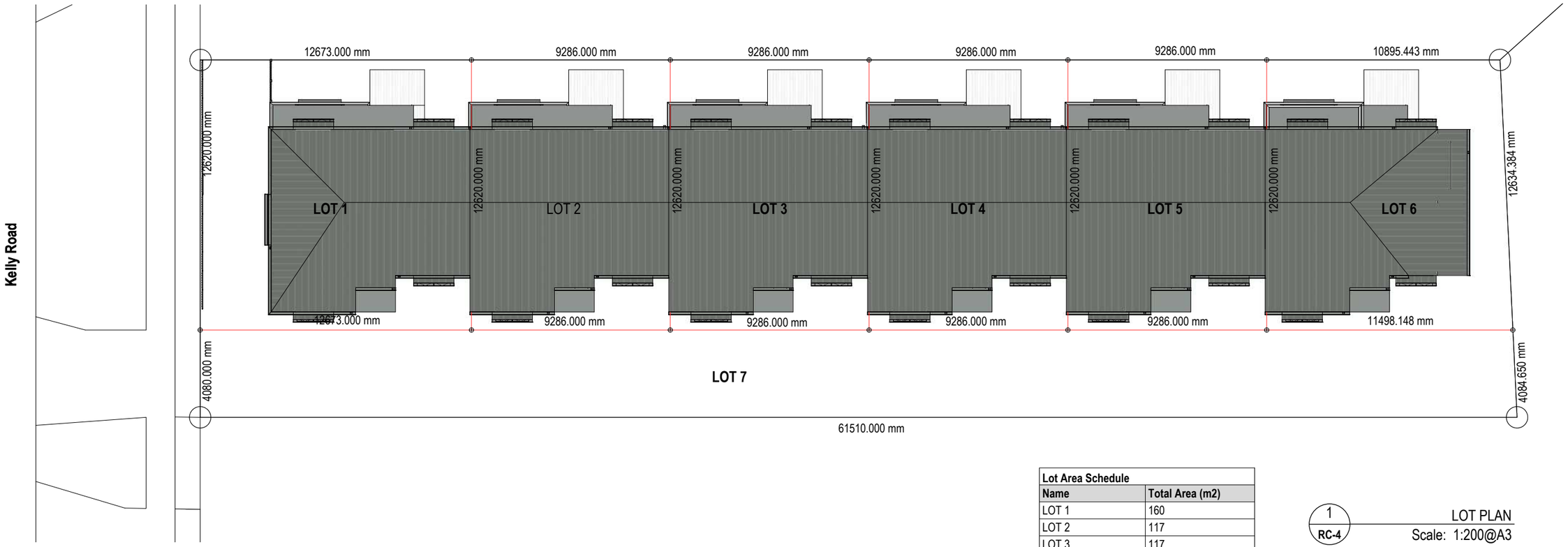
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN SITE PLAN GL	RC	**RC-3**



Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**

1 / RC-4 LOT PLAN
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

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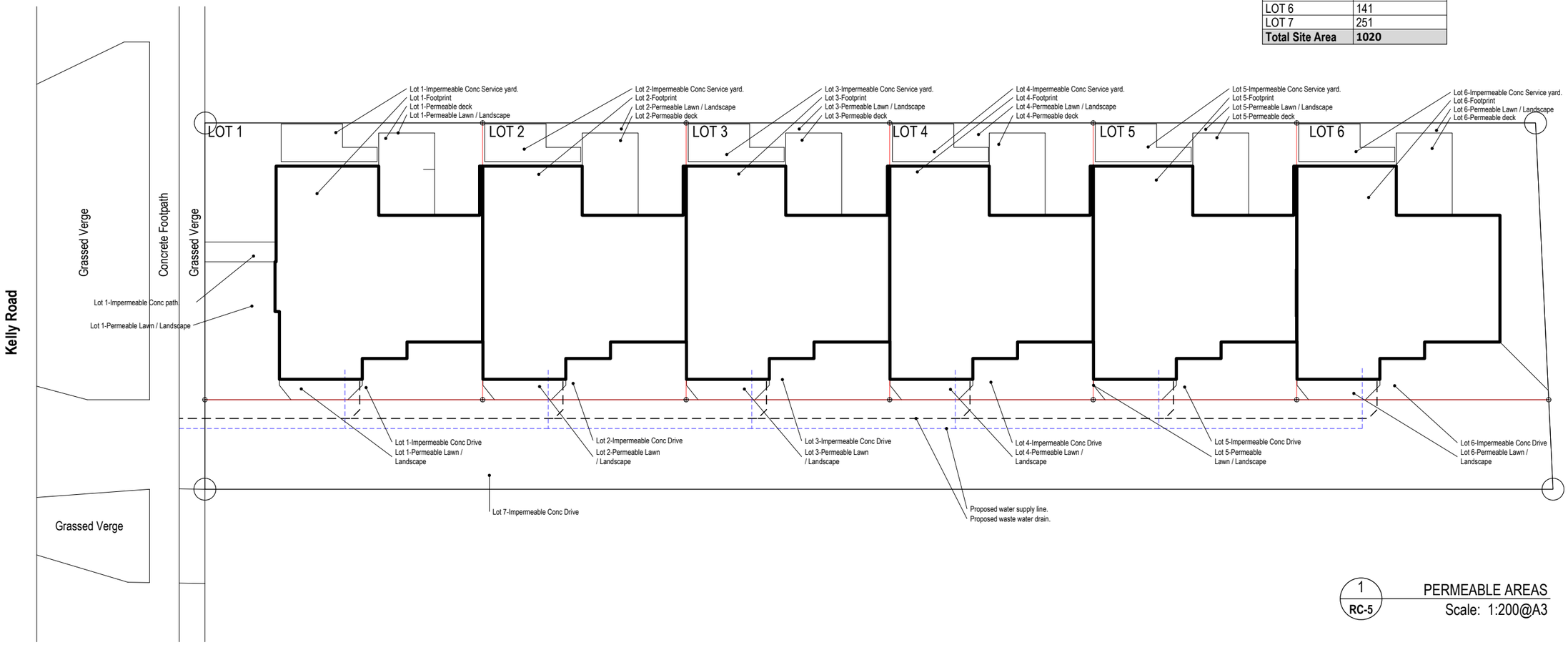
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LOT PLAN	RC	**RC-4**

Site Coverage at roof	
Total Site Area	1020
Total Area at roof	446.36
Site Cover	**43.76%**

Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**



1 / RC-5 PERMEABLE AREAS
Scale: 1:200@A3

Site Permeability Calculation															
Name	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**		**OA Site**
LOT 1		**LOT 2**		**LOT 3**		**LOT 4**		**LOT 5**		**LOT 6**		**LOT 7**			
Lot 1-Footprint	73.12	Lot 2-Footprint	72.11	Lot 3-Footprint	72.11	Lot 4-Footprint	72.11	Lot 5-Footprint	72.11	Lot 6-Footprint	71.73	Lot 7-Impermeable Conc Drive	251		
Lot 1-Permeable deck	9.8	Lot 2-Permeable deck	9.8	Lot 3-Permeable deck	9.8	Lot 4-Permeable deck	9.8	Lot 5-Permeable deck	9.8	Lot 6-Permeable deck	9.8				
Lot 1-Permeable Lawn / Landscape	52.21	Lot 2-Permeable Lawn / Landscape	13.19	Lot 3-Permeable Lawn / Landscape	13.19	Lot 4-Permeable Lawn / Landscape	13.19	Lot 5-Permeable Lawn / Landscape	13.19	Lot 6-Permeable Lawn / Landscape	34.35				
Lot 1-Impermeable Conc Serice Yard and path	8.77	Lot 2-Impermeable Conc Service Yard	5.84	Lot 3-Impermeable Conc Service Yard	5.84	Lot 4-Impermeable Conc Service Yard	5.84	Lot 5-Impermeable Conc Service Yard	5.84	Lot 6-Impermeable Conc Service Yard	5.84				
Lot 1-Impermeable Conc Drive	13.13	Lot 2-Impermeable Conc Drive	13.13	Lot 3-Impermeable Conc Drive	13.13	Lot 4-Impermeable Conc Drive	13.13	Lot 5-Impermeable Conc Drive	13.13	Lot 6-Impermeable Conc Drive	16.47				
Lot 1-Permeable Lawn / Landscape	3.13	Lot 2-Permeable Lawn / Landscape	3.13	Lot 3-Permeable Lawn / Landscape	3.13	Lot 4-Permeable Lawn / Landscape	3.13	Lot 5-Permeable Lawn / Landscape	3.13	Lot 6-Permeable Lawn / Landscape	3.13				
Total	**160.16**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**141.32**			**Site Area**	**1020**
Total Permeable Area	65.14		26.12		26.12		26.12		26.12		47.28			Total Site Permeable Area	216.9
Total Non Permeable Area	95.02		91.08		91.08		91.08		91.08		94.04		250	Total Site Non Permeable Area	803.38
Permeable % of Lot	41%		22%		22%		22%		22%		33%			Permeable % of Total Site	21%
Non Permeable % of Lot	59%		78%		78%		78%		78%		67%			Non Permeable % of Total Site	79%
	100%		100%		100%		100%		100%		100%				100%

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PERMERABLE AREA CALCULATION	RC	**RC-5**

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

FT1-1800h painted closed boarded fence

FT2-1200h Black powder coated pool type fence

1 / RC-6 LANDSCAPE PLAN
Scale: 1:200@A3

GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres

Magnolia Grandiflora-Teddy bear

Pyrus Calleryana-Ornamental Pear

GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

Phormium cookianum-Little Cracker

Phormium cookianum-Evening glow

Phormium cookianum-Emerald Gem

Black Mondo Grass

Project		**Client**	**Documentation**		**Drawing Information**				Project No	**22002**	
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE		SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK			
			Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK			

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LANDSCAPE PLAN	RC	**RC-6**

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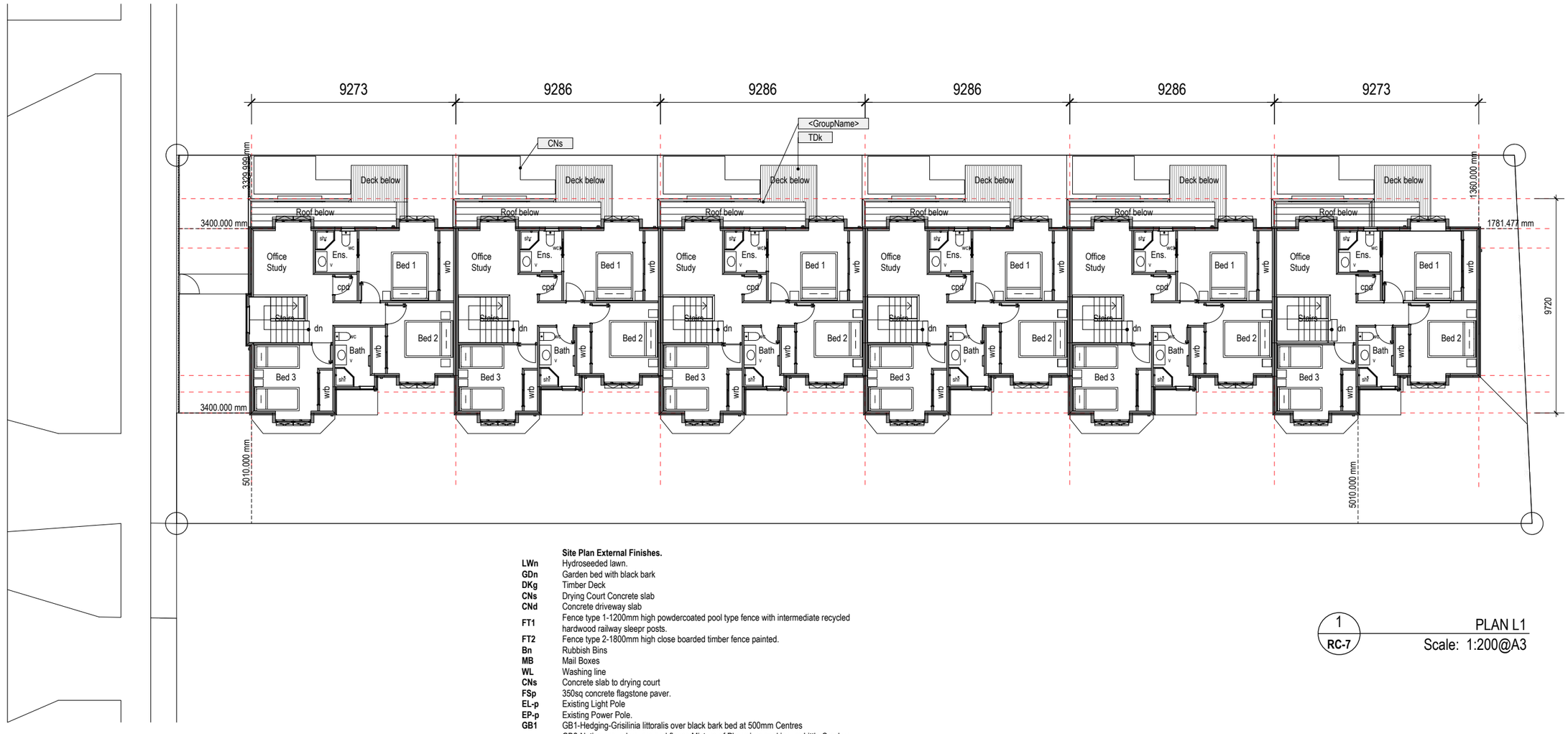
SEKTA ARCHITECTS



Site Plan External Finishes.

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EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

1 / RC-7 PLAN L1

Scale: 1:200@A3

Project	**Client**	**Documentation**		**Drawing Information**				Project No	**22002**
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK		
		Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK		

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN L1	RC	**RC-7**

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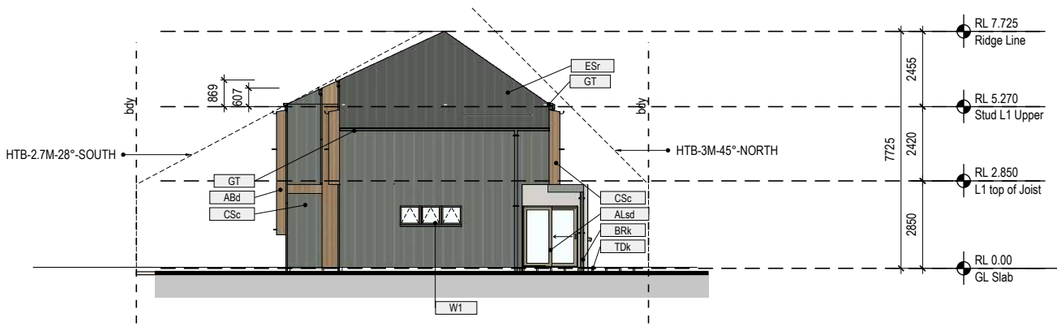
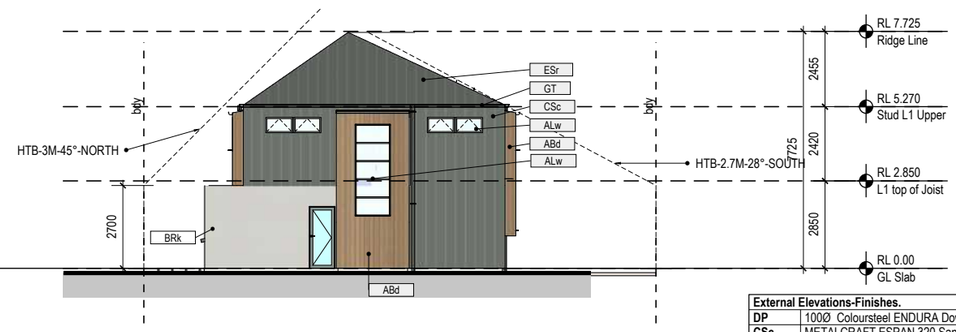
SEKTA ARCHITECTS

1 RC.8 ELEVATION South
Scale: 1:200@A3



2 RC.8 ELEVATION East
Scale: 1:200@A3



3 RC.8 ELEVATION West
Scale: 1:200@A3

Percentage Glazing to Front façade.	
Ext Wall Area	22.94
Window Area	6.74
Window Area percentage of façade	**29.38%**

External Elevations-Finishes.	
DP	100Ø Coloursteel ENDURA Downpipe colour Grey Friars
CSc	METALCRAFT ESPAN 320 Sandstone wall cladding
ALw	Powdercoated Alum Windows
Ald	Powdercoated Glazed hinged door
Alsd	Powdercoated Alum Sliding Door.
ABd	ABODO Timber cladding
TP	Painted timber post
RSD	Powdercoated panel lift garage door.
TDk	Timber Deck
GT	Coloursteel Gutter
DP	Coloursteel Downpipe
BRk	Selected Brick veneer.
ESr	METALCRAFT ESPAN 320 Sandstone roofing 25 degree roof pitch.
CSf	Coloursteel Fascia.

4 RC.8 ELEVATION North
Scale: 1:200@A3

Project	Client
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Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	ELEVATIONS	RC	**RC-8**

GDC Consultants Ltd
Chartered Professional Engineers & Mediators

NATURAL HAZARDS ASSESSMENT REPORT
Proposed New Units
Lot 5 DPS 1176
3 Kelly Road, Cambridge

- **Geotechnical Investigation & Design**
- **Structural and Civil Design**
- **Earthquake Engineering and Assessments**
- **Traffic and Safety Assessments**
- **Road Design and Asset Management**
- **Water/Wastewater/Stormwater Design and Modelling**
- **Project and Construction Management**
- **Mediation**
- **Training**

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Natural Hazards Assessment Report
Proposed New Units
July 2023

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This disclaimer shall apply notwithstanding that the report may be made available to other persons for an application for permission or approval to fulfil a legal requirement.

Revision	A
Status	Section 1.2 and Appendix B

Quality Assurance Statement		
Task	**Responsibility**	**Signature**
Prepared by:	Chamalee Himasha BSc(Hons) Civil Eng Damith Priyankara BSc(Hons) Civil Eng	P.P 11/07/2023
Reviewed by:	David McBryde BE (Civil), AFNZIM, CMEngNZ	12/07/2023
Approved by:	Clement Fernando CPEng. No. 202146	12/7/2023

Prepared by:

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New Zealand

Telephone: 07 838 0090
Email: hamilton@gdcgroup.co.nz

File No: J003406 Rev_A

Table of Contents

1. Introduction

1.1 Project Details

Client's Name	Joshua Te Weehi
Site Address	3 Kelly Road, Cambridge
Legal Description	Lot 5 DPS 1176

1.2 Background

The client, Joshua Te Weehi is proposing to build six (06) units having 73m^2 floor areas in each units, at the above site address. Each unit will include a garage.

The proposed new units will have a roof line that encroaches beyond the space defined for permitted building activities in the Waipa District Council (WDC) plan. Accordingly, A natural hazards assessment is therefore required.

New matters to be considered in substantive decisions on resource consent applications under the Resource Management Act 1991 (RMA), which came into effect on 18 December 2017. Subdivision, and other consents may be refused or have conditions imposed to manage risks from any natural hazards.

Previously decision makers could only take into account the following types of natural hazards when considering resource consent applications for subdivisions under section 106 of the RMA:

- Erosion
- Falling debris
- Subsidence slippage
- Inundation from any source likely to result in material damage

Similarly, decision makers could place conditions on subdivision consents under Section 220 to address the following, but no other natural hazards:

- Erosion
- Subsidence
- Slippage
- Inundation

In April 2017 Sections 106 and 220 of the RMA were amended to broaden the range of natural hazards to be considered, to reflect the definition of 'natural hazards' in section 2 of the Act (as follows):

- Any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.

The intent of this change is to ensure that all natural hazards are considered in decisions and conditions on subdivision consent applications.

1.3 Risk-Based Approach to Considering Natural Hazards

Previously sections 106 and 220 of the RMA did not require decision makers to take a risk management approach to considering natural hazards in subdivision consent applications. Some decisions have excluded low likelihood and high consequence hazards from being considered.

Sections 106 and 220 of the RMA have been amended to introduce a risk-based approach to considering subdivision consent applications. Councils can now refuse subdivision consent if there is a significant risk from natural hazards.

To determine whether there is a significant risk from natural hazards, decision makers are guided by the matters set out in section 106(1A). This includes a combined assessment of:

- the likelihood of natural hazards occurring (whether individual or in combination)
- the material damage that would result from natural hazards to land where the consent is sought, other land, or structures
- any likely subsequent use of the land where the consent is sought that would accelerate, worsen, or result in material damage of the kind referred to in the previous point

This will be assisted over time by provisions in plans and policy statements that recognise and provide for the management of significant risks from natural hazards, which is a new matter of national importance in section 6 of the RMA.

The intent of these changes is to require decision makers to consider the magnitude of risk of natural hazards, including natural hazards that have a high impact, but low probability of occurrence. This will align assessments with the definition of "effect" in section 3 of the RMA, which includes any potential effect of low probability with a high potential impact. ***Ref *1*** *MfE Fact Sheet*

As this subdivision will be under consideration to include information and an assessment of the consequences and probability of an extended set of natural hazards, to enable an assessment to be made of the resulting risk arising from Council consent to the proposal.

1.4 Natural Hazard Assessment – Riverine Inundation

Risk is the product of the probability of and event occurring and the magnitude of the events consequences. The estimation of risk can be quantitative where numerical data is available, or qualitative where numerical data is not complete and only relative estimates are available. The evaluation of low probability high consequence risks are, usually, in the latter category.

For inundation events knowledge of is the risk to life, damage to structures and pre-planning evacuation routes essential. The Figure1 provides useful information for assessment of the impact of inundation on people, property and evacuation routes. ***Ref *2*** *NSW Floodplain Development Manual.*

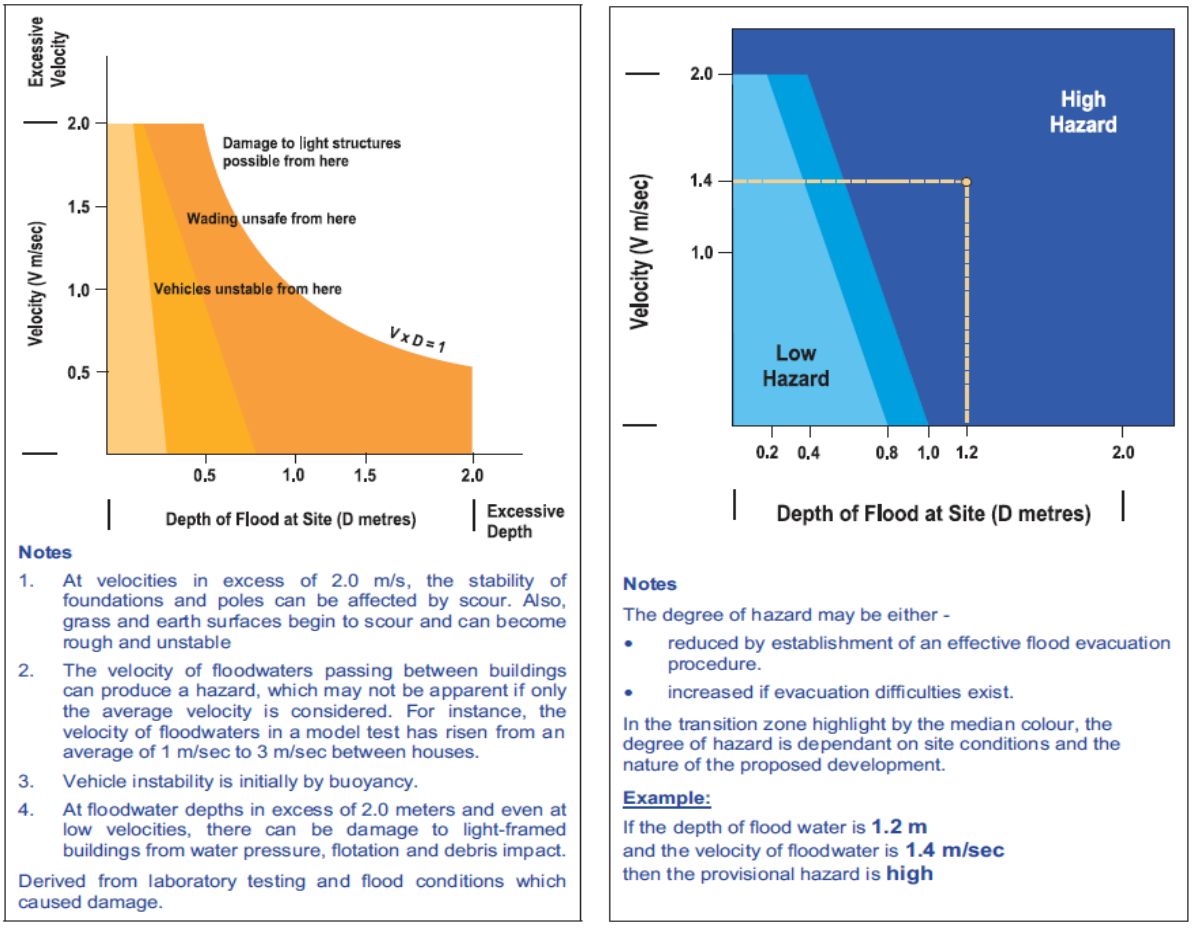


Figure 1. An assessment of the impact of inundation

1.5 Effective Warning Time

The consequences of flooding can be reduced if adequate time is available and is used well. The total warning time available is largely determined by catchment characteristics i.e. the larger the catchment and the slower the rate of rise of floodwaters, the longer the time available. For communities in the lower reaches, warnings are often based on rates of rise and peak water levels at upstream gauges and can vary from hours to days to weeks.

In small, steep catchments and for overland flooding from heavy local rain, there is often no warning time due to the speed of catchment response. Advice may not be available on the expected height of floodwaters.

Effective warning time is the time available for people to undertake appropriate actions, such as lifting or transporting belongings and evacuating. It is less than the total warning time available, because time is needed to mobilise resources, alert the community to the imminent flood threat, and have them begin property protection or

evacuation. Effective warning time is influenced by technology (automatic monitoring equipment is generally used to measure water levels and rainfall) and procedures (flood warnings based on rainfall measurements or predictions rather than river levels in quick-response catchments) that can “buy time for action”, but which provide less certainty of the scale of impact of the flood. Floodplains protected by managed flood relief schemes are generally well monitored and have established early warning systems for their main catchments. Smaller side catchments may be less well monitored and only a short or no effective warning may be available.

1.6 Rate of Rise of Floodwater

A faster rate of rise can potentially result in more danger and damage to the community.

It is typically more rapid in small, steep catchments where floods might peak within hours of rainfall compared to larger, flatter rivers, where it could take up to days or weeks for flood levels to peak in some locations.

2. Natural Hazard Impact Assessment

2.1 Subdivision Description & Natural Hazard Exposure

The proposed subdivision is located approximately 1400m to the east of lake Te Koo Utu, 730m to the Waikato River, as shown in Figure 2. In addition, from the contour map (as shown in Figure3) provided by Waikato Regional Council, the site is located on about 65m MVD level. It is thus not potentially affected by **inundation** from these two sources.

Figure 2. The location of the proposed site

Figure 3. The topographic Lidar contour map

According to Flood Hazard information provided by Waikato Regional Council, the property is not within a Waikato Regional Council managed flood protection or land drainage area, and there is no local scale flood hazard mapping for the property, and thus no flood level information. The property is also not within the regional scale flood hazard area.

In addition, according to GDC's Geotech report, subsoil is mostly comprised of silty sand with no ground water found in the 3m deep boreholes and Landcare Research S-Map data on soil type in Appendix E described that soil type is referred to as allophanic with a good loam topsoil and no reference to recent alluvial deposition in the description, meaning that this area is not arguably vulnerable to liquefaction hazard.

2.2 River Flooding

According to Flood Hazard information provided by Waikato Regional Council, the property is not within the regional flood hazard area as shown in Figure 4, the regional scale flood hazard map. Moreover, the property is not within any flood hazard zone based on Waikato Regional Hazards as shown in Appendix D.

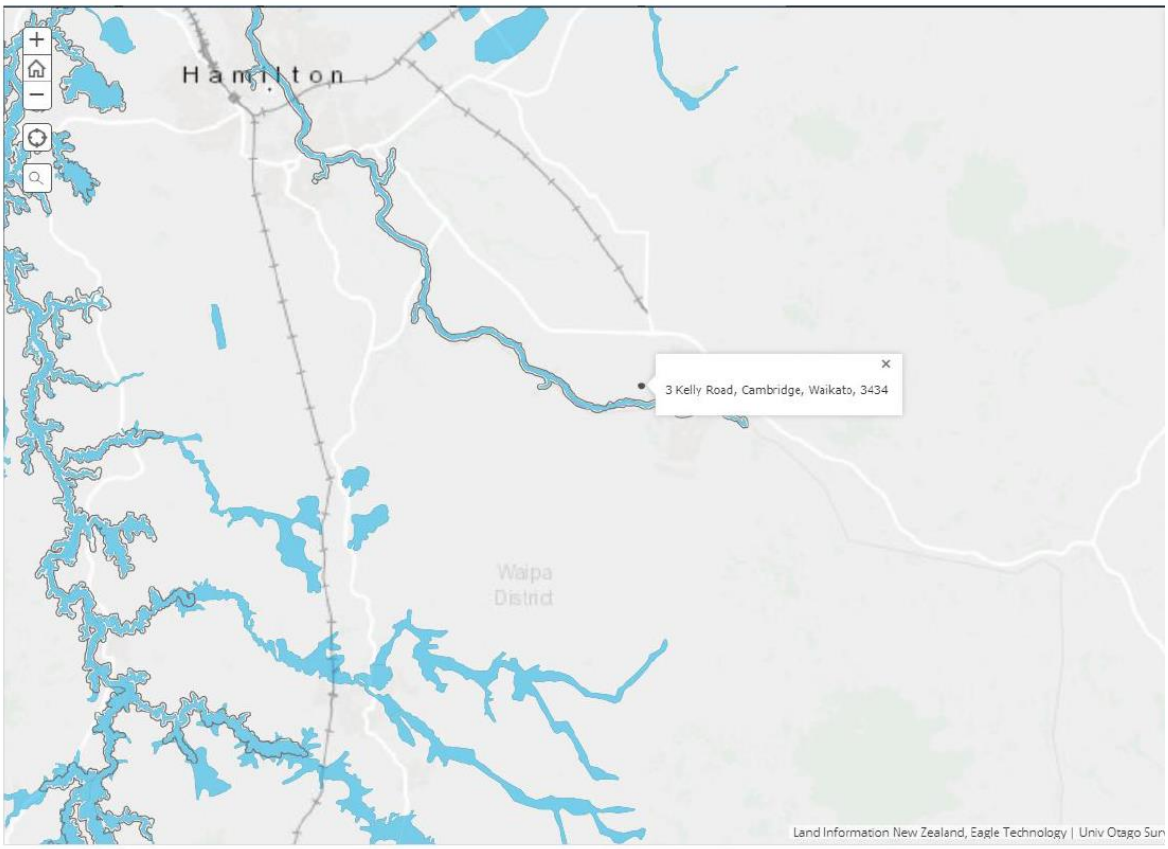


Figure 4. The Regional scale flood hazard map

However, the information provided by WRC does not cover all waterways in the Waikato Region, therefore the presence of a flood hazard zone does not guarantee the existence of such a hazard, nor does the lack of information preclude the existence of a hazard or risk.

Waikato Regional Council flood modelling does not show any overflows from the Waikato River affecting to the proposed property.

2.3 Earthquake Hazard

As shown in Figure 5, the area lies within Zone 1 of NZS 3604:2011 & NZS 1170.5:2004, which is the lowest zone of seismic activity.

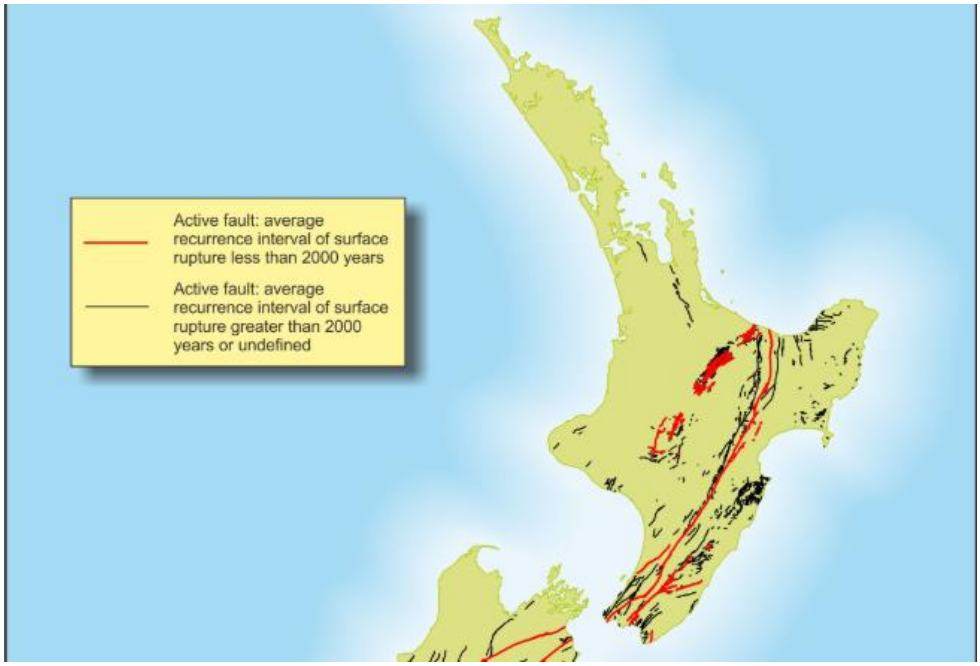


Figure 4. North Island of New Zealand Active Faults (Source: Seismic Resilience)

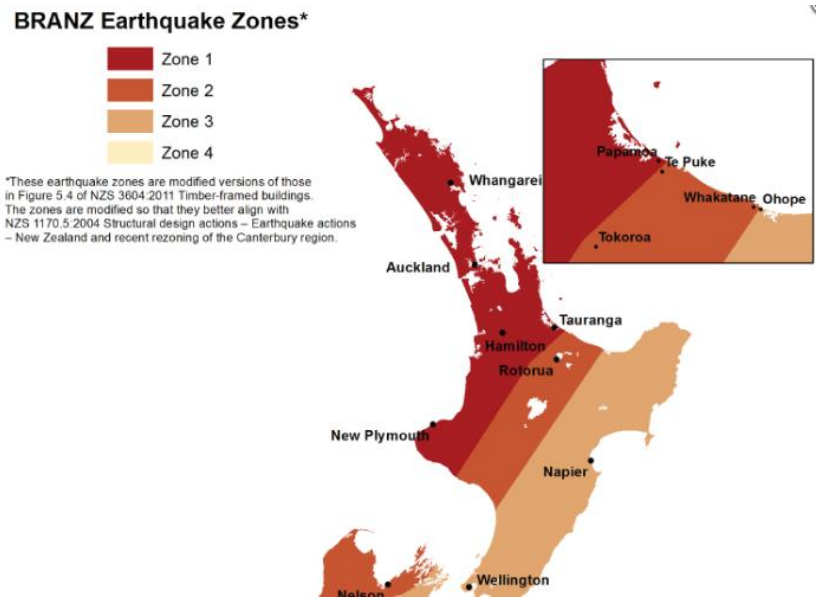


Figure 5. The level of earthquake risk in North Island (Source: Seismic Resilience)

2.4 Volcanic Hazards

When it comes to Volcanic hazard, Volcanic Alert Levels in New Zealand ranging from 0 to 5 are used to define the current status of each volcano (Geonet, 2018). The Figure 6 shows a system of Volcanic Alert Levels and Figure 7 illustrates the alert levels of volcanoes around the site.

	VOLCANIC ALERT LEVEL	VOLCANIC ACTIVITY	MOST LIKELY HAZARDS
Eruption ›	**5**	**Major volcanic eruption**	Eruption hazards on and beyond volcano*
Eruption ›	**4**	**Moderate volcanic eruption**	Eruption hazards on and near volcano*
Eruption ›	**3**	**Minor volcanic eruption**	Eruption hazards near vent*
Unrest ›	2	Moderate to heightened volcanic unrest	Volcanic unrest hazards, potential for eruption hazards
Unrest ›	1	Minor volcanic unrest	Volcanic unrest hazards
›	0	No volcanic unrest	Volcanic environment hazards

Figure 6. The system of volcanic alert levels (Source: Geonet)

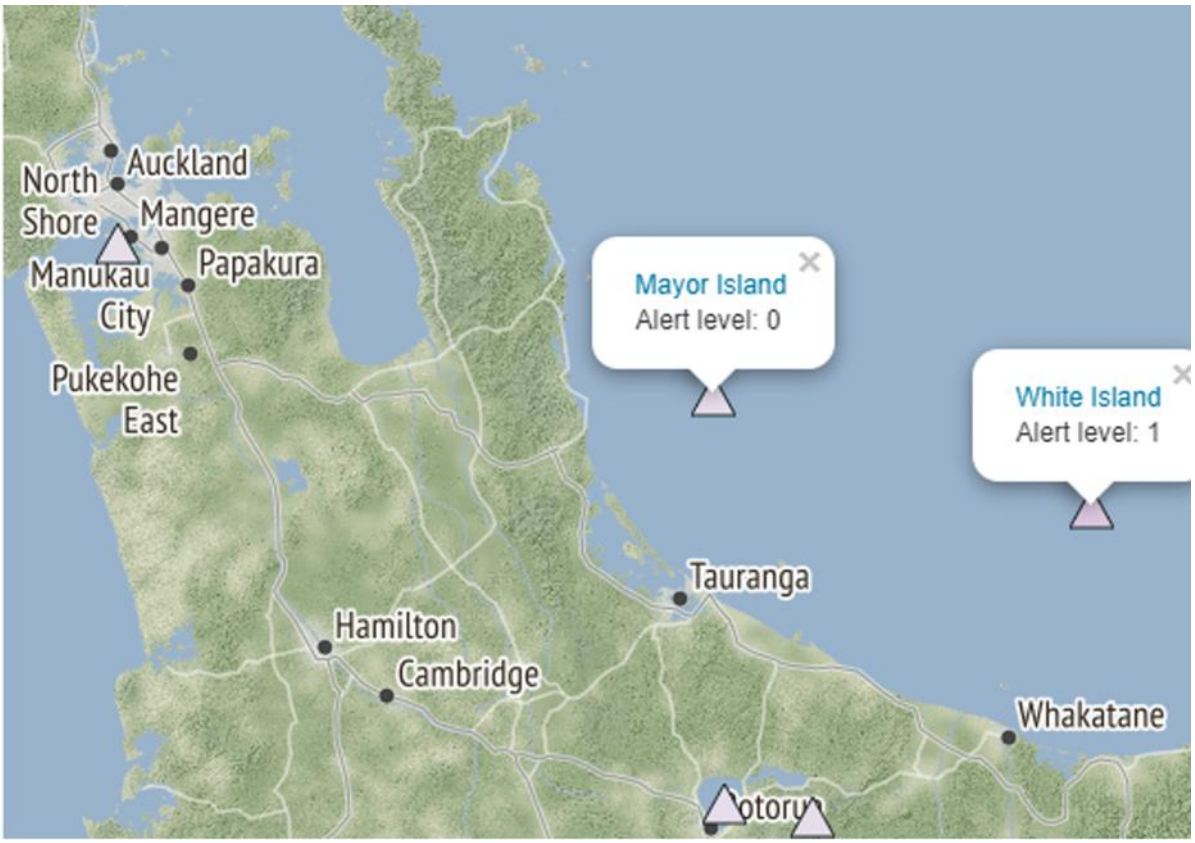


Figure 7. The alert levels of Mayor and White Island (Source: Geonet)

The area is not known for recent **volcanic or geothermal** activity. It is noted that the area comprises a geology from past volcanic activity and there are hot springs on the Cambridge area.

There are active volcanos offshore in the Bay of Plenty, Mayor Island and White Island, and these have the potential of affecting the area directly through air fall tephra and indirectly through tsunami inundation. The Mayor Island magma is also exceptionally rich in chlorine and fluorine. Poisoning of stock and water pollution may be problems even in areas where only trivial amounts of ash have fallen. ***Ref *3*** *Volcanic hazards at Mayor Island &* ***Ref*** **4 Volcanic hazards at White Island.*

The extension of the central North Island volcanic zone through White Island to the north continues with a chain of undersea volcanoes.

The Central North Island Volcanic zone extends from Rotorua south through Taupo to Mt's Tarawera, Ngaruhoe and Ruapehu. The latter three are active volcanos. Lake Taupo is the caldera of a super volcano which erupts periodically. Over the past 26,000 years it has erupted 28 times. Eruptions from Taupo would severely affect most of the central North Island, directly through airfall debris and indirectly by pumice build-up and transport down river systems.

3.0 Conclusion

As demonstrated, there is no evidence that the exposure to natural hazards at 3 Kelly Road is no different from other properties in the vicinity that form part of the Cambridge urban area.

4.0 Limitations

This report has been prepared for Joshua Te Weeh as our client in accordance with the agreed scope of services. The reliance by other parties on this document shall without our prior agreement in writing be at such parties' sole risk.

Recommendations and opinions in this report are based on data obtained from the investigations, site observations and documents provided by the Cambridge urban area Environmental Consultancy as detailed in this report.

The flood hazard information provided by WRC is based on the existing condition of the catchment. Any significant change to this condition may alter the flood hazard that affects this property. Where significant changes do occur, the flood hazard information and this report should be reviewed.

Please contact any of the undersigned persons for further information. If there are any questions arising from the above or during construction or pre-purchase of land, please call this office.

This report shall not be used to interpret any form of financial transaction.

5. 0 References – Natural Hazards Eastern Coromandel

*1 Resource Legislation Amendments 2017 – Fact Sheet 10 : MfE https://www.waikatoregion.govt.nz/services/regional-services/regional-hazards-and-emergency-management/coastal-hazards/tsunami/tsunami-hazard.

*2 NSW Floodplain Development Manual 2005

*3 Volcanic hazards at Mayor Island.Houghton, B.F.; Wilson, C.J.N.; Weaver, S.D.; Lanphere, M.A.; Barclay, J. 1995 [Palmerston North, NZ]: Ministry of Civil Defence. Volcanic hazards information series 6. 23 p.

*4 Volcanic hazards at White Island .Nairn, I.A.; Houghton, B.F.; Cole, J.W. 1996. 2nd ed. [Palmerston North, NZ]: Ministry of Civil Defence. Volcanic hazards information series 3. 27 p.

*5 Coastal Hazards and Climate Change - Guidance for Local Government 2017: MfE

*6 Archaeology of the Bay of Plenty, Law, G. 2008: DoC

*7 Potential tsunami hazard associated with the Kerepehi Fault, Hauraki Gulf, New Zealand Tsunami Overview Study Chick, L.M. (1999). Potential tsunami hazard associated with the Kerepehi Fault, Hauraki Gulf, New Zealand (Thesis, Master of Science (MSc). University of Waikato, Hamilton, New Zealand. Retrieved from http://hdl.handle.net/10289/8511
Permanent Research Commons link: http://hdl.handle.net/10289/8511

*8 Numerical modelling of Tsunami Inundation at Whangamata, Whiritoa, and Onemana, Coromandel Peninsula Borerro, JC.: 2014. eCoast Ltd

*9 Tsunami Hazard for the Bay of Plenty and eastern Coromandel Peninsula Bell, RG. ;Goff J., Downes G. Berryman, K. ;Walters, RA., Chague-Goff, C., Barnes, P., Wright, I. 2004 :NIWA WC BoPRC

*10 Seismic Resilience. Faults. Faults in New Zealand, Earthquake risk zones. http://www.seismicresilience.org.nz/topics/seismic-science-and-site-influences/faults/

*11 Geonet, Geological hazard information for New Zealand, Vocano. https://www.geonet.org.nz/volcano

*12 GNS Science, New Zealand Active Faults Database. https://data.gns.cri.nz/af/

APPENDIX A

Site Location Plan

Print Date: 3/09/2021
Print Time: 2:04 AM

Scale: 1:330

Original Sheet Size A4

Projection: NZGD2000 / New Zealand Transverse Mercator 2000
Bounds: 1815636.29231309,5803635.63069979
1815748.22760071,5803697.87764021

APPENDIX B

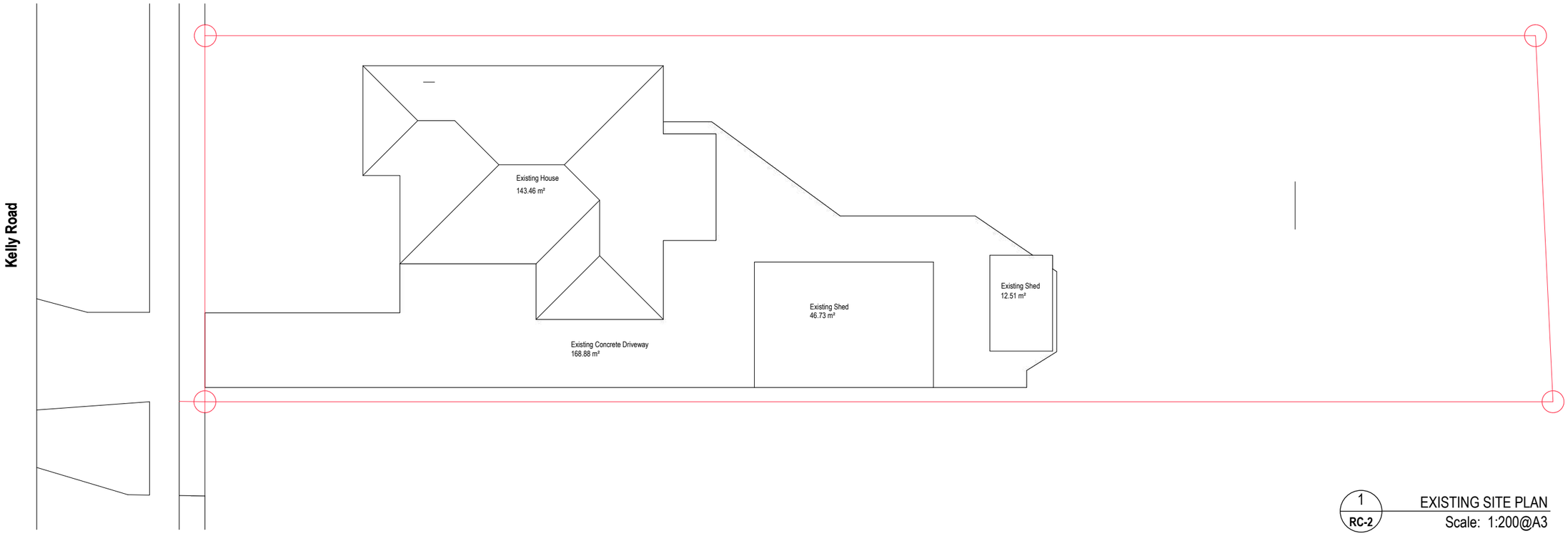
Proposed Scheme Plan

Resource Consent Drawings

Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	COVER PAGE	RC	**RC-1**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	EXISTING SITE PLAN	RC	**RC-2**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN SITE PLAN GL	RC	**RC-3**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LOT PLAN	RC	**RC-4**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PERMERABLE AREA CALCULATION	RC	**RC-5**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LANDSCAPE PLAN	RC	**RC-6**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN L1	RC	**RC-7**
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	ELEVATIONS	RC	**RC-8**

Kelly Road Residential Development
Cambridge for
SLOANE STREET LTD

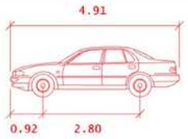
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	COVER PAGE	RC	**RC-1**



1
RC-2

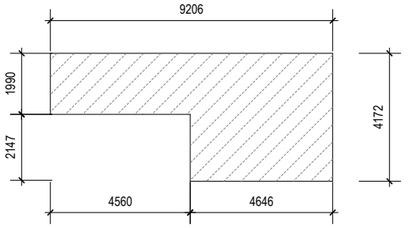
EXISTING SITE PLAN
Scale: 1:200@A3

Project: PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	Client: SLOANE STREET LTD	Documentation: Documentation Date July 5, 2023; Documentation Phase Concept Design	Drawing Information: Approved Stan K; Checked SK; Dwg Scale as shown; Drawn SK	Project No 22002	This drawing is confidential and shall only be used for the purposes of this project. © Copyright SEKTA Architects Ltd, 2012.	P +64 7 853 2204; F +64 7 853 2201; W www.sekta.co.nz; M PO Box 12029 Chartwell Ham.					
		Date	Revision	Revision Description	SC REF	Drawing		Phase	Drawing No		
		Wednesday, July 05, 2023	1	Resource Consent Issue	SC10	EXISTING SITE PLAN		RC	RC-2		

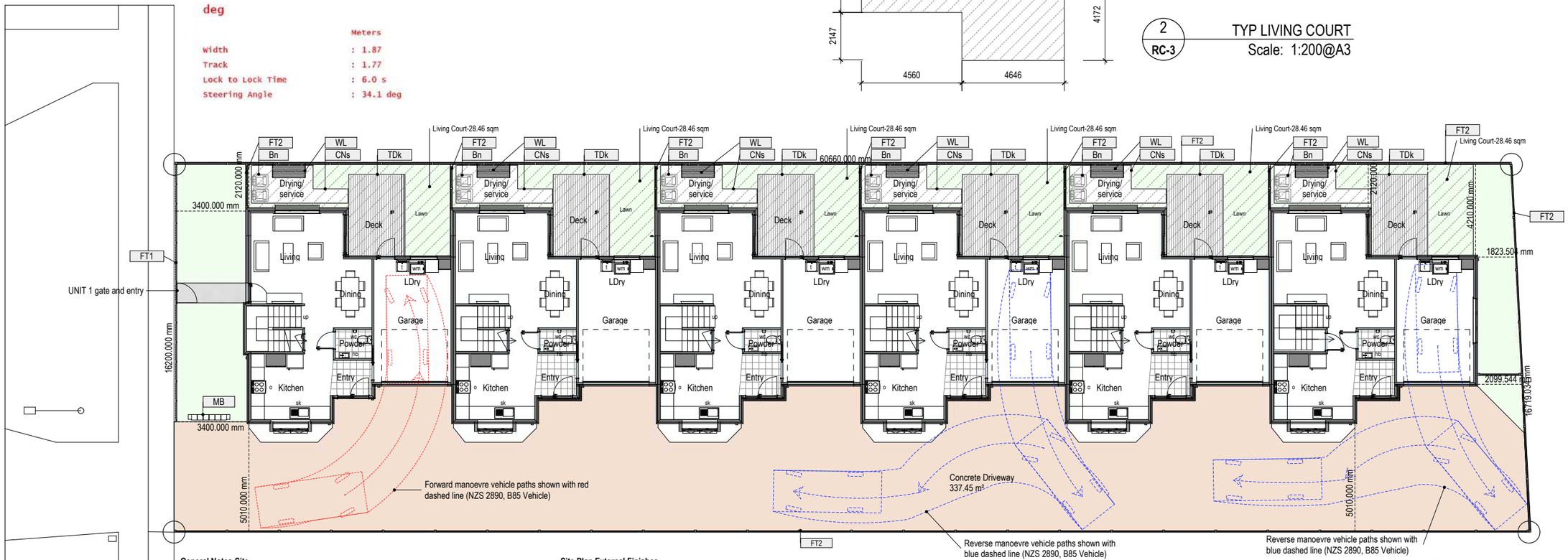


deg

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0 s
Steering Angle	: 34.1 deg



2 RC-3 TYP LIVING COURT
Scale: 1:200@A3



1 RC-3 SITE PLAN GL PLAN
Scale: 1:200@A3

General Notes-Site

Site Area	1019 sqm
Site Address	3 Kelly Road, Cambridge
Legal Description	LOT 5 Deposited Plan South Auckland 1176
EXISTING GFA ON SITE	
Existing House	144
Existing Sheds	58
Concrete Driveway	169
Total Existing GFA on Site	**371**
NEW BUILDING	
Unit 1	
GFA GL	73.12
GFA L1	66.16
Unit 2	
GFA GL	73.12
GFA L1	66.24
Unit 3	
GFA GL	73.12
GFA L1	66.24
Unit 4	
GFA GL	73.12
GFA L1	66.24
Unit 5	
GFA GL	73.12
GFA L1	66.24
Unit 6	
GFA GL	73.12
GFA L1	66.24
Total GFA	**836.08**
Territorial Authority	Waipa District Council
Wind Zone	Zone A
Earthquake Zone	Zone 1
Cliamte Zone	Zone 2
Exposure Zone	Zone B
Boundary Information	Survey and site info shown on architectural drawings is for information only.
Landscaping	Refer Landscaping Plan

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

2 RC-3 SITE LOCALITY PLAN
Scale: 1:3500@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

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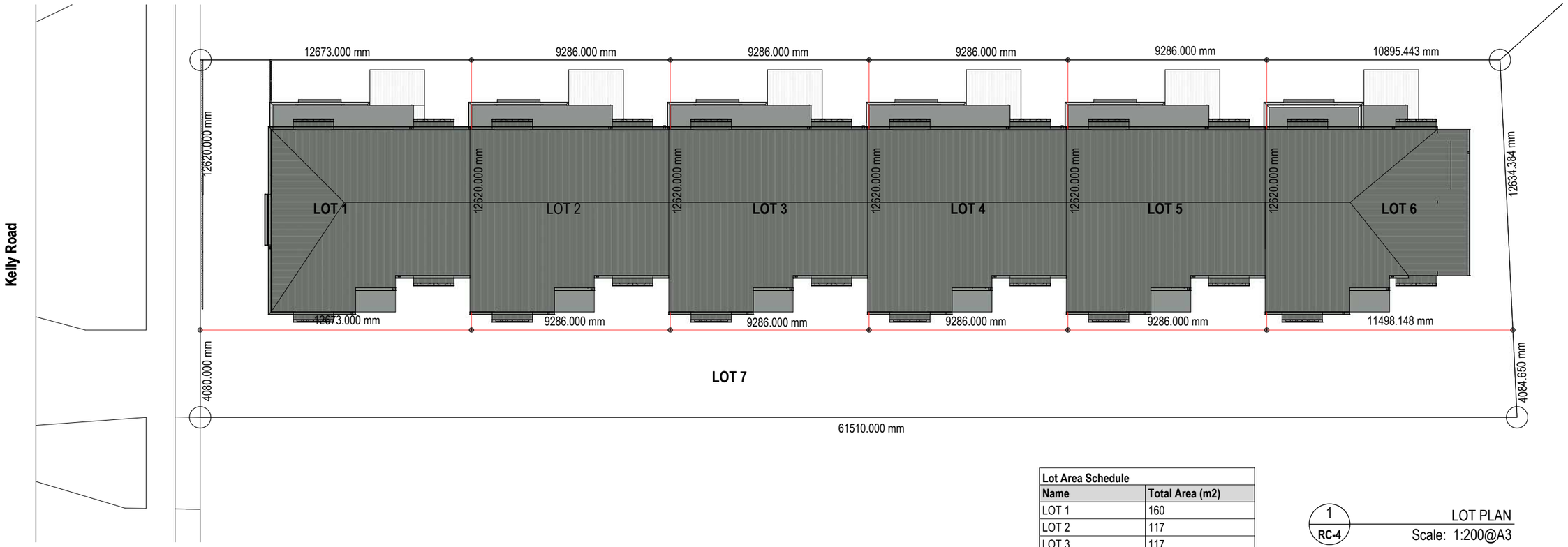
M PO Box 12029 Chartwell Ham.

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN SITE PLAN GL	RC	**RC-3**



Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**

1 / RC-4 LOT PLAN
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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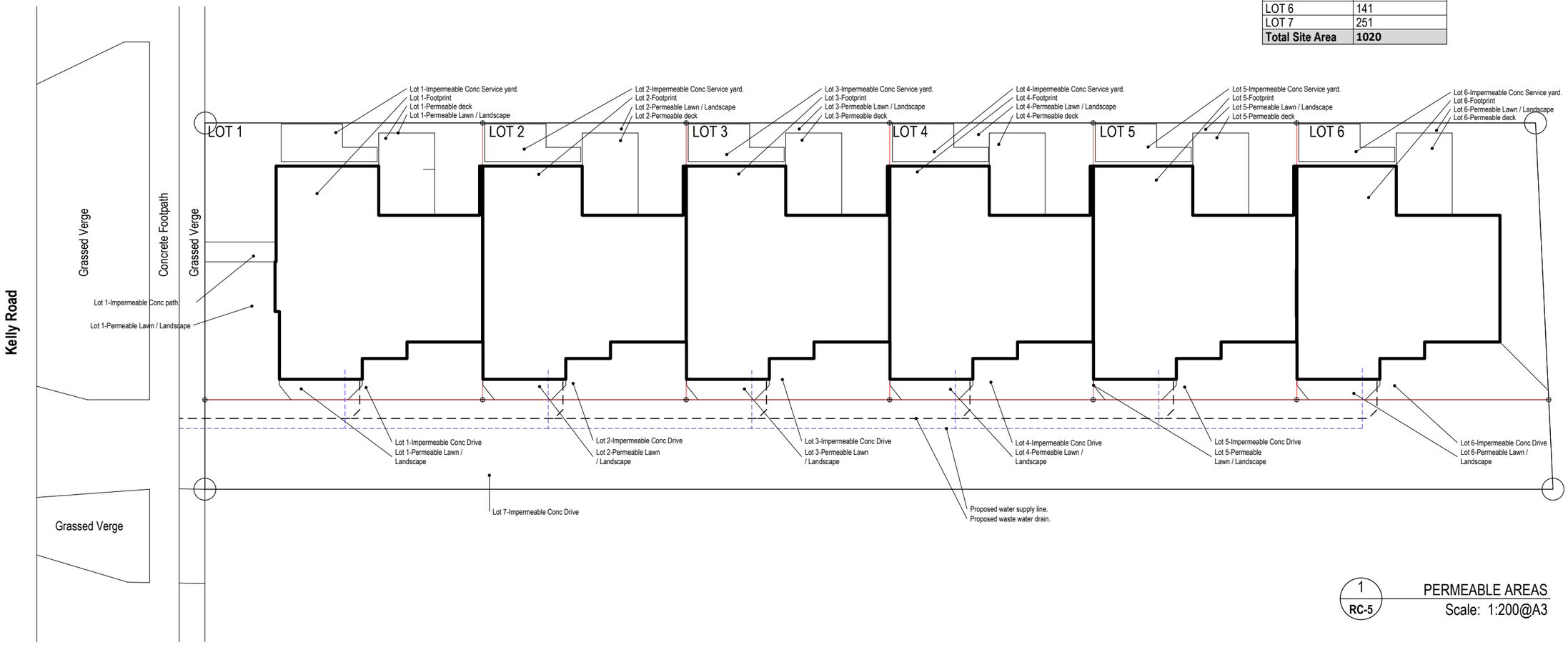
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LOT PLAN	RC	**RC-4**

Site Coverage at roof	
Total Site Area	1020
Total Area at roof	446.36
Site Cover	**43.76%**

Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**



1 / RC-5 PERMEABLE AREAS
Scale: 1:200@A3

Site Permeability Calculation															
Name	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**		**OA Site**
LOT 1		**LOT 2**		**LOT 3**		**LOT 4**		**LOT 5**		**LOT 6**		**LOT 7**			
Lot 1-Footprint	73.12	Lot 2-Footprint	72.11	Lot 3-Footprint	72.11	Lot 4-Footprint	72.11	Lot 5-Footprint	72.11	Lot 6-Footprint	71.73	Lot 7-Impermeable Conc Drive	251		
Lot 1-Permeable deck	9.8	Lot 2-Permeable deck	9.8	Lot 3-Permeable deck	9.8	Lot 4-Permeable deck	9.8	Lot 5-Permeable deck	9.8	Lot 6-Permeable deck	9.8				
Lot 1-Permeable Lawn / Landscape	52.21	Lot 2-Permeable Lawn / Landscape	13.19	Lot 3-Permeable Lawn / Landscape	13.19	Lot 4-Permeable Lawn / Landscape	13.19	Lot 5-Permeable Lawn / Landscape	13.19	Lot 6-Permeable Lawn / Landscape	34.35				
Lot 1-Impermeable Conc Serice Yard and path	8.77	Lot 2-Impermeable Conc Service Yard	5.84	Lot 3-Impermeable Conc Service Yard	5.84	Lot 4-Impermeable Conc Service Yard	5.84	Lot 5-Impermeable Conc Service Yard	5.84	Lot 6-Impermeable Conc Service Yard	5.84				
Lot 1-Impermeable Conc Drive	13.13	Lot 2-Impermeable Conc Drive	13.13	Lot 3-Impermeable Conc Drive	13.13	Lot 4-Impermeable Conc Drive	13.13	Lot 5-Impermeable Conc Drive	13.13	Lot 6-Impermeable Conc Drive	16.47				
Lot 1-Permeable Lawn / Landscape	3.13	Lot 2-Permeable Lawn / Landscape	3.13	Lot 3-Permeable Lawn / Landscape	3.13	Lot 4-Permeable Lawn / Landscape	3.13	Lot 5-Permeable Lawn / Landscape	3.13	Lot 6-Permeable Lawn / Landscape	3.13				
Total	**160.16**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**117.2**	**Total**	**141.32**			**Site Area**	**1020**
Total Permeable Area	65.14		26.12		26.12		26.12		26.12		47.28			Total Site Permeable Area	216.9
Total Non Permeable Area	95.02		91.08		91.08		91.08		91.08		94.04		250	Total Site Non Permeable Area	803.38
Permeable % of Lot	41%		22%		22%		22%		22%		33%			Permeable % of Total Site	21%
Non Permeable % of Lot	59%		78%		78%		78%		78%		67%			Non Permeable % of Total Site	79%
	100%		100%		100%		100%		100%		100%				100%

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PERMERABLE AREA CALCULATION	RC	**RC-5**

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

FT1-1800h painted closed boarded fence

FT2-1200h Black powder coated pool type fence

1 / RC-6 LANDSCAPE PLAN
Scale: 1:200@A3

GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres

Magnolia Grandiflora-Teddy bear

Pyrus Calleryana-Ornamental Pear

GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

Phormium cookianum-Little Cracker

Phormium cookianum-Evening glow

Phormium cookianum-Emerald Gem

Black Mondo Grass

Project		**Client**	**Documentation**		**Drawing Information**				Project No	**22002**	
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE		SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK			
			Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK			

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	LANDSCAPE PLAN	RC	**RC-6**

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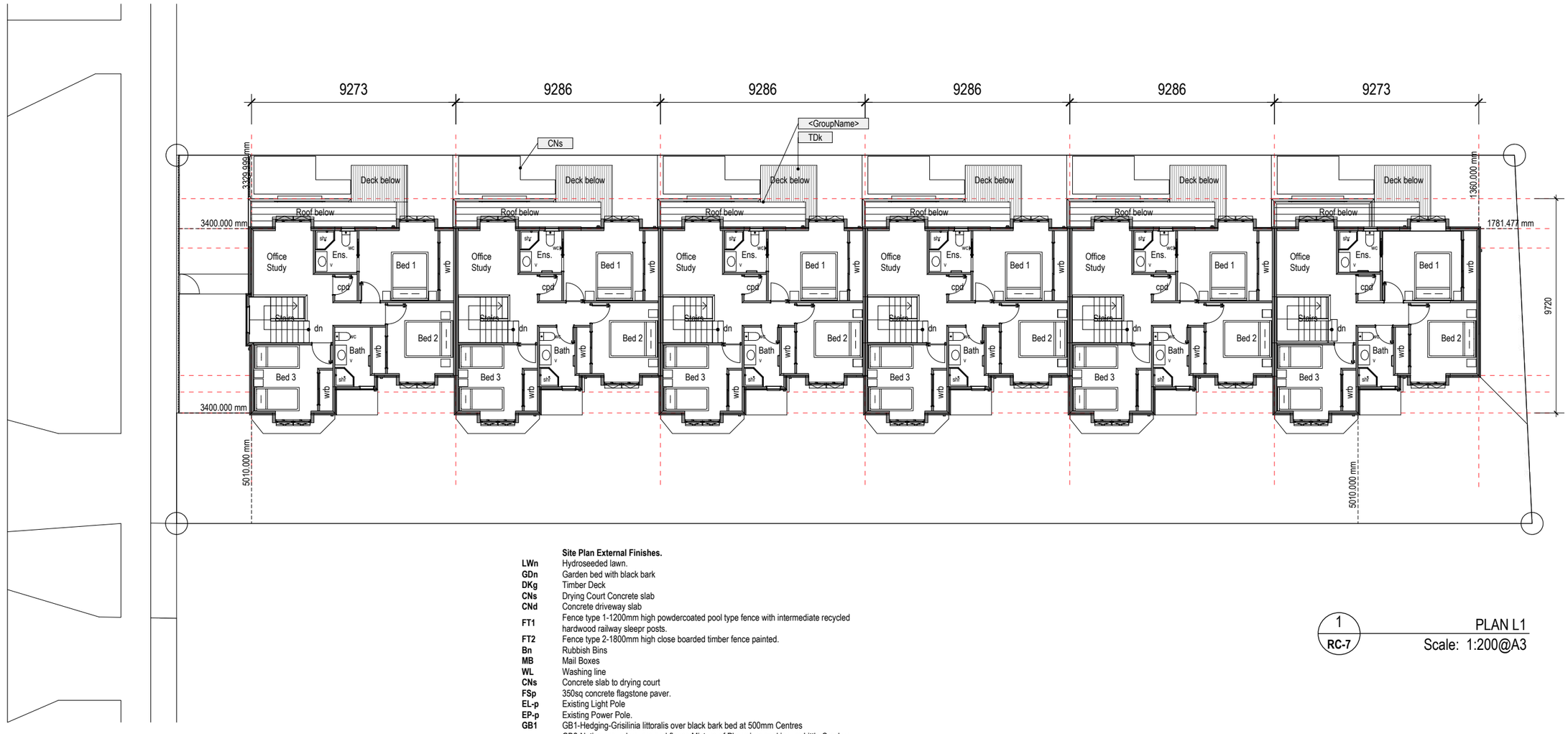
SEKTA ARCHITECTS



Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
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WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

1 / RC-7 PLAN L1

Scale: 1:200@A3

Project	**Client**	**Documentation**		**Drawing Information**				Project No	**22002**
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD	Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK		
		Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK		

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	PLAN L1	RC	**RC-7**

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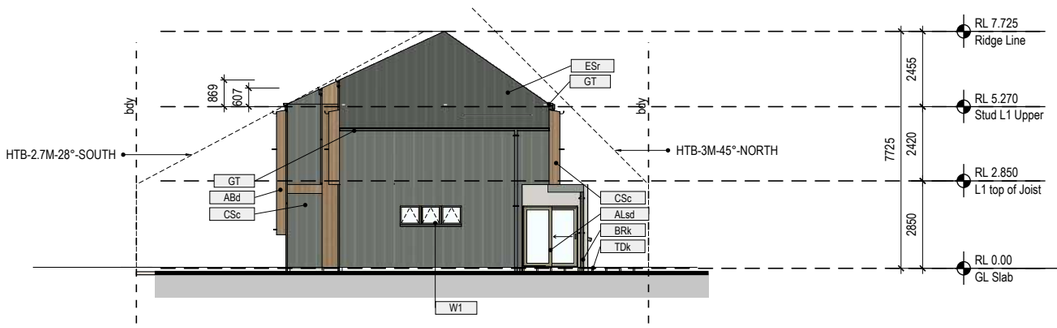
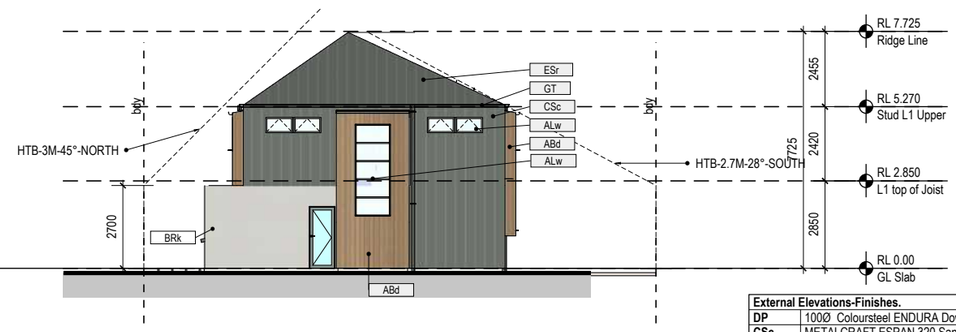
SEKTA ARCHITECTS

1 RC.8 ELEVATION South
Scale: 1:200@A3



2 RC.8 ELEVATION East
Scale: 1:200@A3



3 RC.8 ELEVATION West
Scale: 1:200@A3

Percentage Glazing to Front façade.	
Ext Wall Area	22.94
Window Area	6.74
Window Area percentage of façade	**29.38%**

External Elevations-Finishes.	
DP	100Ø Coloursteel ENDURA Downpipe colour Grey Friars
CSc	METALCRAFT ESPAN 320 Sandstone wall cladding
ALw	Powdercoated Alum Windows
Ald	Powdercoated Glazed hinged door
Alsd	Powdercoated Alum Sliding Door.
ABd	ABODO Timber cladding
TP	Painted timber post
RSD	Powdercoated panel lift garage door.
TDk	Timber Deck
GT	Coloursteel Gutter
DP	Coloursteel Downpipe
BRk	Selected Brick veneer.
ESr	METALCRAFT ESPAN 320 Sandstone roofing 25 degree roof pitch.
CSf	Coloursteel Fascia.

4 RC.8 ELEVATION North
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	July 5, 2023	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

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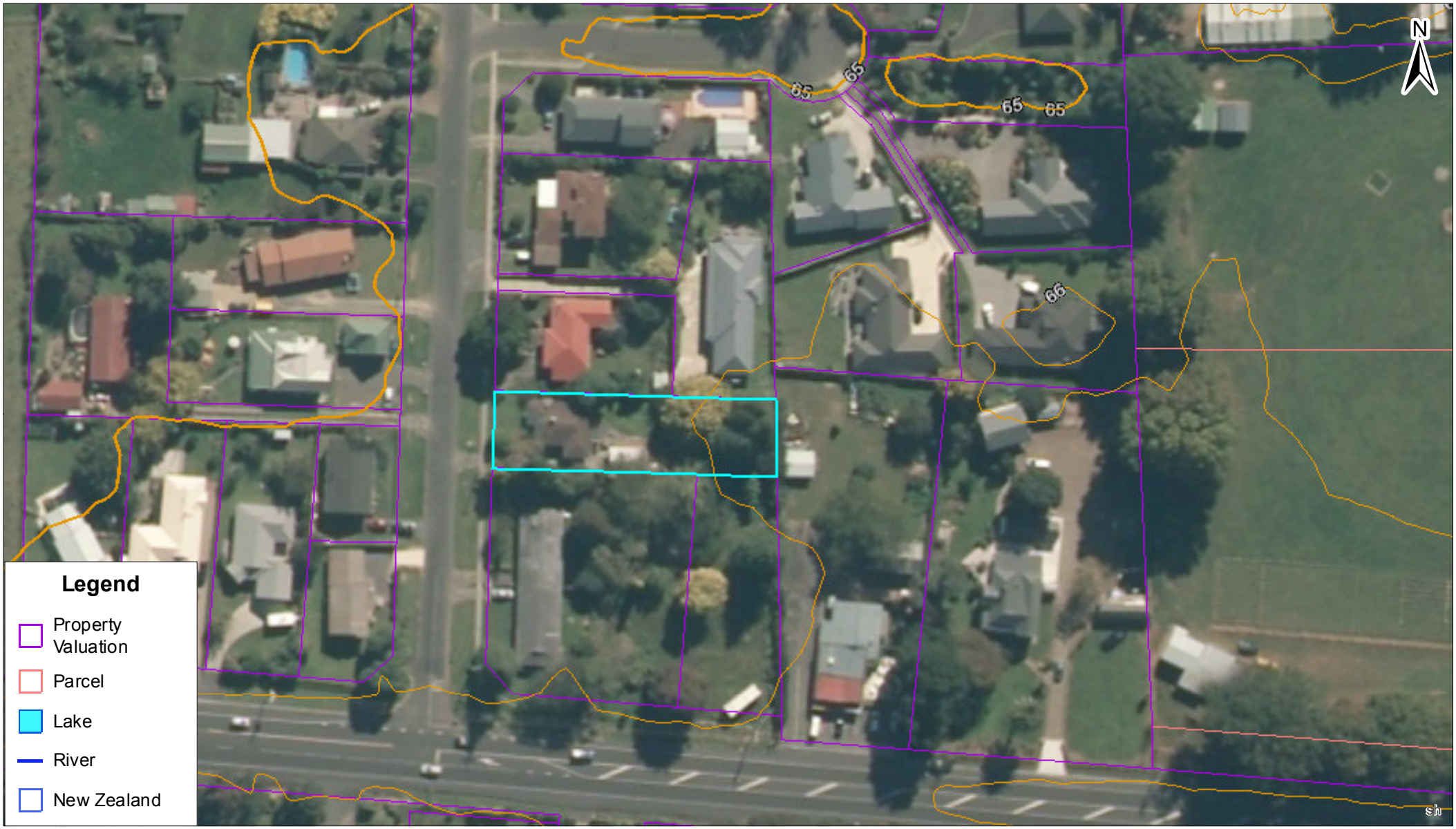
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Wednesday, July 05, 2023	1	Resource Consent Issue	**SC10**	ELEVATIONS	RC	**RC-8**

APPENDIX C

Contour Map



Acknowledgements and Disclaimers:
Data from various sources including, but not limited to, Land Information NZ, Landcare Research NZ, NZ Aerial Mapping, Statistics NZ and Waikato Regional Council - Copyright Reserved.
For further details see Terms of Use:
https://www.waikatoregion.govt.nz/services/maps/terms-of-use/ .
For specific copyright and disclaimer information for the data displayed in this map please refer to the relevant dataset metadata within the Waikato Regional Council Data Catalogue:
https://www.waikatoregion.govt.nz/services/data-catalogue/

Contour Map

0 0.08 km

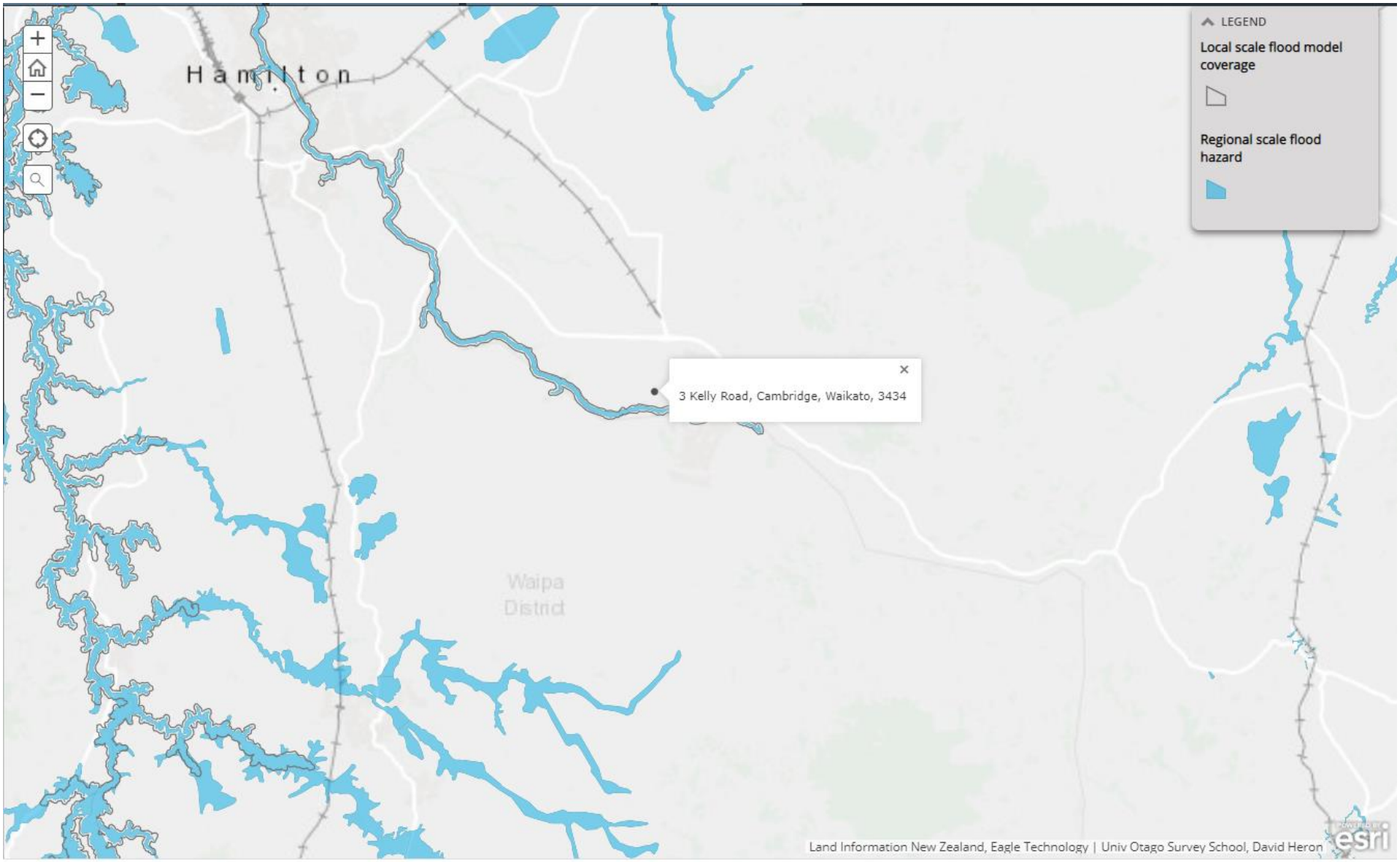
Scale at A4 = 1:1,129

Date: 3/09/2021

Waikato REGIONAL COUNCIL
Te Kaunihera ā Rohe o Waikato

APPENDIX D

Flood Hazard Map



APPENDIX E

Landcare Research S-map Soil Report

Manaaki Whenua
Landcare Research

S O I L R E P O R T

Environment Waikato

Otorohanga_39a.2

Report generated: 3-Sep-2021 from https://smap.landcareresearch.co.nz

Otor_39a.2 (50% of the mapunit at location (1815677, 5803670), Confidence: Medium)

This information sheet describes the typical average properties of the specified soil to a depth of 1 metre, and should not be the primary source of data when making land use decisions on individual farms and paddocks. S-map correlates soils across New Zealand. Both the old soil name and the new correlated (soil family) name are listed below.

Capture of the base soil information in this region was funded by Environment Waikato , Manaaki Whenua and MPI.

Soil Classification

Soil Classification:
Typic Orthic Allophanic Soils (LOT)

Family Name:
Otorohanga (Otor)

Sibling Name:
Otorohanga_39a.2 (Otor_39a.2)

Soil profile material
Tephric soil

Depth class (diggability)
Deep (> 1 m)

Profile texture
loam over sand

Parent Material

Stones/rocks
rhyolitic rock

Soil material
rhyolitic and andesite rock

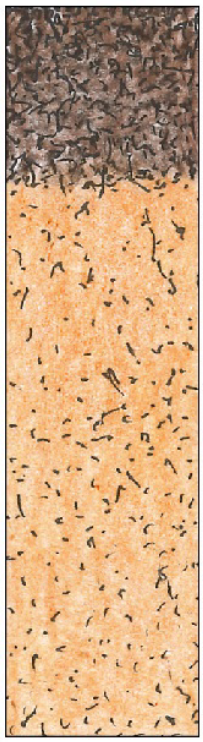
Origin
Alluvium

Soil Sibling Concept

This soil belongs to the Allophanic soil order of the New Zealand soil classification. Allophanic Soils are dominated by allophane (and also imogolite or ferrihydrite) minerals. These stiff, jelly-like minerals coat the sand and silt grains and maintain a porous, low density structure with weak strength. The soils are identified by a distinctly greasy feel when moistened and rubbed firmly between the fingers. The soil is easy to dig and samples crumble easily when crushed in the hand. It is formed in alluvial sand silt or gravel deposited by running water, from rhyolite parent material.

The topsoil typically has loam texture and is stoneless. The subsoil has dominantly sand textures, with at least 30 cm of rock fragments deposited by a volcano within 100 cm of the mineral soil depth. The plant rooting depth extends beyond 1m.

Generally the soil is well drained with very low vulnerability of water logging in non-irrigated conditions, and has high soil water holding capacity. Inherently these soils have a very low structural vulnerability and a low N leaching potential, which should be accounted for when making land management decisions.



Allan Hewitt ©

Orthic Allophanic

About this publication

- This information sheet describes the *typical average properties* of the specified soil.
- For further information on individual soils, contact Landcare Research New Zealand Ltd: www.landcareresearch.co.nz
- Advice should be sought from soil and land use experts before making decisions on individual farms and paddocks.
- The information has been derived from numerous sources. It may not be complete, correct or up to date.
- This information sheet is licensed by Landcare Research on an "as is" and "as available" basis and without any warranty of any kind, either express or implied.
- Landcare Research shall not be liable on any legal basis (including without limitation negligence) and expressly excludes all liability for loss or damage howsoever and whenever caused to a user of this factsheet.

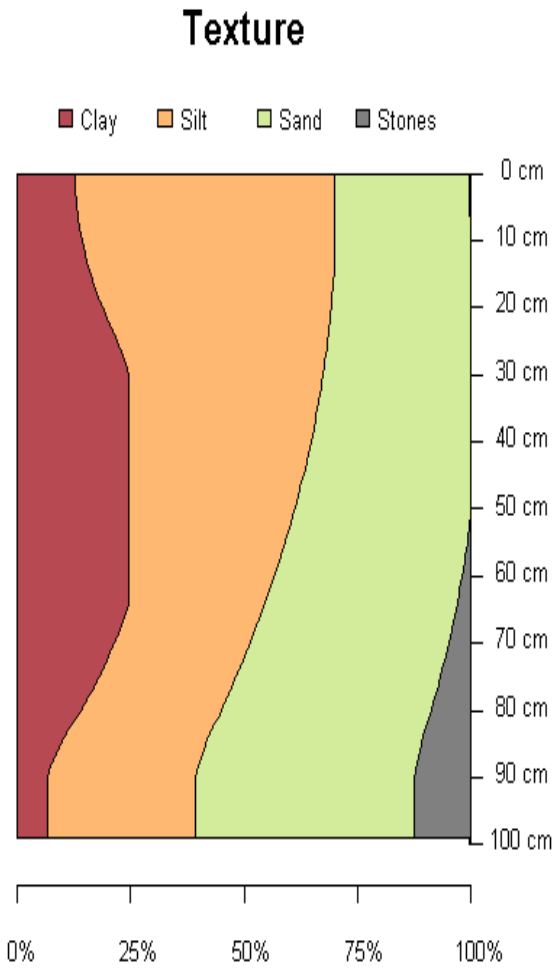
Otorohanga_39a.2

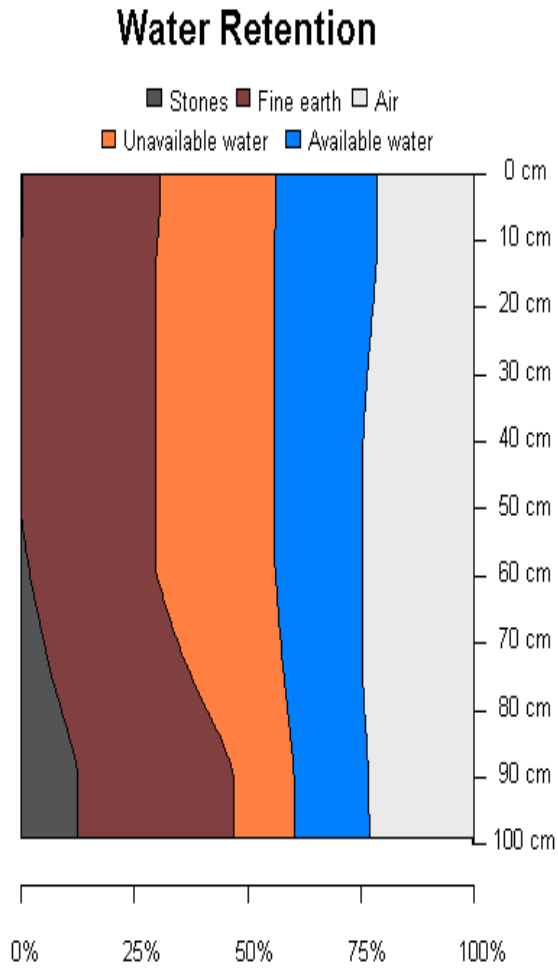
Soil horizons

Characteristics of functional horizons in order from top to base of profile:

Functional Horizon	Thickness	Stones	Clay*	Sand*	Permeability
Loamy Weak, Acidic Tephric	18 - 25 cm	0 %	12 - 18 %	25 - 35 %	rapid
Loamy Weak, Acidic Tephric	50 - 70 cm	0 - 3 %	20 - 30 %	35 - 45 %	moderate
Stony (lapilli) Sandy Loose, Acidic Tep	15 - 20 cm	5 - 20 %	3 - 12 %	45 - 65 %	rapid

* clay and sand percent values are for the mineral fines (excludes stones). Silt = 100 - (clay + sand)





The values for the graphs above have been generated from horizon and pedotransfer data. These values have then been splined to create continuous estimates of soil water holding capacity and particle size distribution the soil profile. These curves express the particle size distribution and water retention of the soil however there may be barriers to rooting depth that are not necessarily represented in these properties directly. It is advisable to check the potential rooting depth and rooting barrier fields in the soil physical properties section on page three of this factsheet.

Otorohanga_39a.2

Soil physical properties

Depth class (diggability)
Deep (> 1 m)

Potential rooting depth
Unlimited

Rooting barrier
No significant barrier within 1 m

Depth to hard rock
No hard rock within 1 m

Depth to soft rock
No soft rock within 1 m

Depth to stony layer class
No significant stony layer within

Texture profile
Loam over sand

Topsoil stoniness
Stoneless

Topsoil clay range
12 - 18 %

Drainage class
Well drained

Permeability profile
Moderate

Depth to slowly permeable horizon
No slowly permeable horizon

Permeability of slowest horizon
Moderate (4 - 72 mm/h)

Aeration in root zone
Unlimited

Profile available water

(0 - 30cm or root barrier)	(0 - 60cm or root barrier)	(0 - 100cm or root barrier)
High (65 mm)	Very high (124 mm)	High (201 mm)

Dry bulk density

topsoil	subsoil
0.91 g/cm³	0.84 g/cm³

Soil chemical properties

Topsoil P retention
High (83%)

Soil management factors

Vulnerability classes relate to soil properties only and do not take into account climate or management

Soil structure integrity

Structural vulnerability
Very low (0.29)

Pugging vulnerability
not available yet

Septic tank installation category
A1 if slope > 15 deg otherwise B3

Contaminant management

N leaching vulnerability
Low

P leaching vulnerability
not available yet

Dairy effluent (FDE) risk category
D

Water management

Water logging vulnerability
Very low

Drought vulnerability - if not irrigated
Low

Bypass flow
Low

Hydrological soil group
A

Relative Runoff Potential

Slope	0-3°	4-7°	8-15°	16-25°	>25°
Risk	VL	VL	VL	VL	L

SINDI - Soil quality Indicators

SINDI - Soil Quality Indicators

A suite of soil quality indicators is available from http://sindi.landcareresearch.co.nz/

- Compare your soil with information from our soils databases.
- Assess the intrinsic resources and biological, chemical and physical quality of your soil
- See how your soil measures up against current understanding of optimal values.
- Learn about the effect each indicator has on soil quality and some general management practices that could be implemented to improve soil quality.

Otorohanga_39a.2

Soil information for OVERSEER

The following information can be entered in the OVERSEER® Nutrient Budget model. This information is derived from the S-map soil properties which are matched to the most appropriate OVERSEER categories. Please read the notes below for further information.

Soil description page

1. Select **Link to S-map**
2. Under S-map sibling data enter the S-map name/ref: **Otor_39a.2**

Considerations when using Smap soil properties in OVERSEER

- The soil water values are estimated using a regression model based on soil order, parent rock, soil functional horizon information (stone content, soil density class), as well as texture (field estimates of sand, silt and clay percentages). The model is based on laboratory - measured water content data held in the National Soils Database and other Manaaki Whenua datasets. Most of this data comes from soils under long-term pasture and may vary from land under arable use, irrigation, etc.

- Each value is an estimate of the water content of the whole soil within the target depth range or to the depth of the root barrier (if this occurs above the base of the target depth). Where soil layers contain stones, the soil water content has been decreased according to the stone content.

- S-map only contains information on soils to a depth of 100 cm. The soil water estimates in the > 60 cm depth category assume that the bottom functional horizon that extends to 100 cm, continues down to a depth of 150cm. Where it is known by the user that there is an impermeable layer or non-fractured bedrock between 100 and 150 cm, this depth should be entered into OVERSEER. Where there is a change in the soil profile characteristics below 100 cm, the user should be aware that the values provided on this factsheet for the > 60 cm depth category will not reflect this change. For example, the presence of gravels at 120 cm would usually result in lower soil water estimates in the > 60 cm depth category. Note though that this assumption only impacts on a cropping block, as OVERSEER uses soil data from just the top 60 cm in pastoral blocks.

- OVERSEER requires the soil water values to be non-zero integers (even though zero is a valid value below a root barrier), and the wilting point value must be less than the field capacity value which must be less than the saturation value. The S-map water content estimates supplied by the S-map web service have been rounded to integers and may be assigned minimal values to meet these OVERSEER requirements. These modifications will result in a slightly less accurate estimate of Available Water to 60 cm (labelled PAW in OVERSEER) than that provided on the first page of this factsheet, but this is not expected to lead to any significant difference in outputs from OVERSEER .

Manaaki Whenua
Landcare Research

Environment Waikato
REGIONAL COUNCIL

Appendix 6 Preapplication Meeting notes & comments

1.1 Pre-Application Meeting (PG/0140/21)

A pre-application meeting was held with Council on Tuesday 10th August 2021 with Aidan Kirkby-McLeod (Project Planner), Dawn Pritchard (Planner), Tony Coutts (Senior Development Engineer). The proposal at the time of the preapplication meeting was very similar in nature to the proposal in this application, being six dwellings over 2 storeys, 3 bedrooms each with open plan living and single garaging. Alternatively, a five-dwelling complex was proposed with double garaging.

As discussed further in this report, the pre-application meeting notes discuss:

"Activity Status Table Rule 2.4.1.3(b) provides for compact housing involving 7 or more dwellings per site as a Restricted Discretionary Activity. The most recent development plan illustrates 6 dwellings (units) therefore does not meet the number of houses expected for compact housing under this rule. Rather, the proposal meets the provisions for Infill Housing Rule 2.4.1.3 which provides for three to six principal dwellings per site. In light of this, after the meeting and after some discussions with Council's Planning Team, it has been agreed that should an application be made it can be assessed as compact housing for the following reasons:

- *The proposal meets the Compact Housing definition of the District Plan:*
- *"means a housing DEVELOPMENT in which the design of BUILDINGS, their layout, access and relationship to one another has been planned in a comprehensive manner to achieve compatibility between all BUILDINGS on a SITE or SITES. This can include Papakāinga housing, terraces, duplexes, apartments and townhouses, but excludes RETIREMENT VILLAGE ACCOMMODATION AND ASSOCIATED CARE FACILITIES".*
- *Despite the technical non-compliance of providing less than 7 dwellings, the preliminary plan illustrates a layout which could be considered to meet the definition of a compact housing development.*
- *It is also noted that within the Activity Status Table 2.4.1.3(b) compact housing should be enabled within 200 metres of an active recreation open space and within 100 metres of a local centre. Notwithstanding, compact housing within the C2/C3 Structure Plan Area retains a Restricted Discretionary Activity Status, all of which are relevant to the subject site.*

Ms Pritchard raised if any consideration of Development Contributions has been undertaken as DC's ('DC's') within C2 and C3 Structure Plan is high at around $62,000.00 per housing equivalent unit. Following the meeting, further discussion with Council's Consultant Engineer, Mr Richard Bax, confirms that whilst the site is within these structure plan areas, dispensation in parts of these areas is provided for which includes the subject site 3 Kelly Road, as such DC's impose the Cambridge catchment. Currently as of 1 July 2021 this is set at $12,289.00 per housing equivalent unit."

After the pre-application meeting, on 26th January 2022, we submitted further drawings to Council for the six-dwelling building for further comments and some urban design recommendations. A review was undertaken by Sam Foster at Beca, which included the following:

Street Relationship & Appearance

The arrangement of the building on the site means that only Unit 1 interacts with Kelly Road. The internal arrangement of the dwelling means that habitable rooms are located to face the street, providing passive

surveillance of Kelly Road, which is a positive aspect of the design. The façade is broken into sections through the use of materials and colour, with a portion of the first floor balcony apparent from the street. There is minimal variation to the front façade and building line. Additional variation to the building line of the front unit and turning the unit to face the street, including relocating the pedestrian access to provide direct, legible access to the street, would improve the interface with the public realm. It appears as if low planting and fencing is proposed on the street frontage, this approach is positive as it will assist in establishing a positive street front interface and support the provision of passive surveillance of Kelly Road.

Amenity

The introduction of 6 dwellings overlooking the properties to the north, will reduce the sense of privacy in these locations. In combination with the length and bulk of the building proposed, the development is likely to have effects on the amenity of adjacent properties to the north.

Internal amenity is generally considered to be good with each dwelling having north facing ground floor outdoor living area of approximately 30m^2 that are private, with shelter. 1st floor balconies are provided adjacent to the study nooks, however these are relatively small at approximately 5.1m^2 with a depth of 1.2m. While these are secondary outdoor areas, increasing the depth would provide a more useable space for occupants.

Site Circulation – vehicle and pedestrian

The six units proposed are accessed via a shared driveway. The driveway also provides pedestrian access. Due to the length and width of the accessway (approx. 4.9m) introduction of some form of treatment or pedestrian accessway is recommended to slow speeds and create a safer pedestrian environment. This could be introduced through different materials, such as pavers, exposed aggregate and additional planting. Planting along the driveway and at the end would assist in softening the large area of hard surfacing and break up the linear nature of the space.

Landscape Design

Minimal landscaping is shown. The use of low planting and fencing on the street boundary is supported. Inclusion of landscaping and amenity planting for individual units and for the driveway as described above is recommended as the design progresses.

Form & Appearance

As discussed above, the development proposes a building that at 55m is long for the setting and the proposed terraces are considered to have a bulk and mass that is out of scale for the context and character of the area. Breaking the building into two footprints would assist in integrating increased density on the site and would present a transition between the Commercial Cambridge Lodge and the detached dwellings to the north. The three hipped roofs joined together still read as one building broken into three segments, rather than 6 units. Further roof design would assist in breaking up the bulk and mass of the building.

The design uses a mixture of materials which is positive. As noted above, the treatment of the northern façade emphasizes the length of the building through the use of Stria cladding along the length of the first floor. Increased articulation of this façade would help to break up the visual length of the elevation.

Materials should be chosen that are high quality and low maintenance, particularly for the first floor, maintaining a well-kept appearance into the future. The proposed mix of materials is positive and contributes to breaking up the façade and helping to articulate the buildings. As the concept develops, the use of multiple

materials within the design should be considered balanced with protection and careful detailing of junctions for weathertightness.

Conclusion

The proposed site provides the opportunity for increased density as a transition from the commercial scale and land use of the Cambridge Lodge, however this needs to be balanced with the surburban context and scale of the development. The 55m building presents a large bulk and scale for the location and improvements could be made to better integrate the development with the surrounding context. This includes exploring the use of a mix of typologies i.e. a duplex and a terrace, increasing the variation in the roofline and materials, particularly on the northern elevation.

The front elevation could provide a more positive interaction with the street, with the unit oriented to face the street, with pedestrian access provided directly from the footpath that is separate from the vehicle crossing. Additional variation to the front building line would provide a more engaging frontage to the streetscape, this could be provided via a clear pedestrian access with and the inclusion of a covered patio or porch. As the design develops, consideration needs to be given to providing a safe space for pedestrians to access dwellings and to the landscaping detail which will provide amenity to residents.

FORM 8a

Written Approval of Affected Persons

Form 8a of the Resource Management Regulations 2003.

Affected persons written approval to an activity that is the subject of a resource consent application.

Note to affected person(s) signing written approval form:

Before asking for your written approval the applicant should fully explain the proposal to you. You should look at the application containing a description of the activity and the accompanying plans. If you decide to give written approval to this application, you must complete the form and sign the applicant's plans. You should only sign this form if you fully understand the proposal. You should seek expert or legal advice if you need the proposal or resource consent process explained to you. You may also contact Council for assistance.

Conditional written approval **cannot** be accepted. There is no obligation to sign this form, and no reasons need to be given. If signing on behalf of a trust or company, please provide additional written evidence that you have signing authority.

To be completed by the applicant

To: Name of Council that is the consent authority for this application: Select a Council

Applicant Name

Full name: Kelly Road Investments

Contact daytime phone: 021 550744

Location of Proposed Activity

Please complete with as many details as you can, so the site for your proposal is clearly identifiable. Include details such as unit number, street number, street name and town.

Property address:

3 Kelly Road Cambridge

Legal description:

Lot 5 DPS 1176

Description of Proposed Activity

Please provide a brief description of your proposal, including which District Plan Rules or standards are infringed.

6x new units

THAMES COROMANDEL DISTRICT COUNCIL | Hamilton City Council Te kaunihera o Kirikiriroa | HAURAKI DISTRICT COUNCIL | Waipa DISTRICT COUNCIL | Waitomo District Council

ROTORUA LAKES COUNCIL Te kaunihera o ngā roto o Rotorua | matamata piako district council | South Waikato District Council | Waikato DISTRICT COUNCIL Te Kaunihera aa Takiwaa o Waikato

FORM 8a

V2 | 20.11.19

To be completed by affected person:

Owner to Complete

☐ I/we are also the occupier(s)

Full name of all property owners:

Kelly Road Holdings

Being the owner/s of Street address:

1 Kelly Road Cambridge

Legal description: Lot 1 DP499979

☑ I/we have authority to sign on behalf of all of the owners of the property.

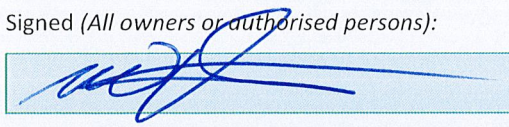
☐ I/we have read the full application for resource consent, the Assessment of Environmental Effects and any associated plans.

☑ I/we have signed and dated each page.

☑ Declaration: In signing this written approval, I/we understand that Council must decide that I/we are no longer an affected person, and Council must not have regard to any adverse effect on me/us.

☑ I/we understand that I/we may withdraw my/our written approval by giving written notice to Council before the hearing, if there is one, or, if there is not, before the application is determined.

Signed *(All owners or authorised persons):*



Date: 17/5/2022

Fax/Email: mikel@bl.co.nz

Contact Phone Number: 021 935215

Postal Address:

Occupier to Complete

☐ I/we are also the occupier(s)

Full name of all occupiers:

Being the occupiers of Street address:

Legal description:

☐ I/we have authority to sign on behalf of all of the occupiers of the property.

☐ I/we have read the full application for resource consent, the Assessment of Environmental Effects and any associated plans.

☐ I/we have signed and dated each page.

☐ Declaration: In signing this written approval, I/we understand that Council must decide that I/we are no longer an affected person, and Council must not have regard to any adverse effect on me/us.

☐ I/we understand that I/we may withdraw my/our written approval by giving written notice to Council before the hearing, if there is one, or, if there is not, before the application is determined.

Signed *(All occupiers or authorised persons):*

Date:

Fax/Email:

Contact Phone Number:

Postal Address:

B&A

Information pack for the purposes of obtaining written approval s95E(3) of the RMA

This document contains the following:

- Site Description (the subject site explained)
- Zoning and site maps
- Description of the proposal
- Waipa District Plan Rules assessment (why consent is required and what activity status the application is for)
- Site plan

Note – A full copy of the resource consent application is available on request.

Site Description

The site is 1021m^2 and is located on the eastern side of Kelly Road. The site currently contains an existing residential dwelling and accessory building. An aerial photograph of the site is identified in Figure 1 (below).

The site is located within the midst of residential activities to the north, with a newly established medical centre on the adjoining site to the south. Under the Waipa District Plan (District Plan) the site has Deferred Residential zoning (Figure 2) and does not form part of any policy overlays.

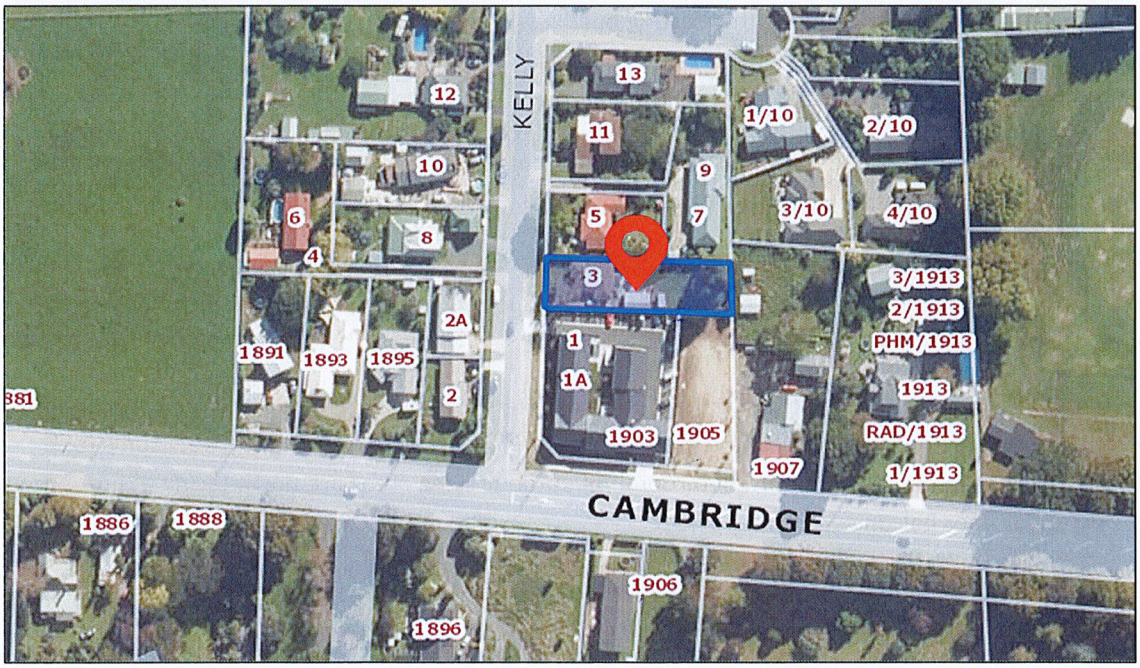


Figure 1: Aerial photograph of the subject site

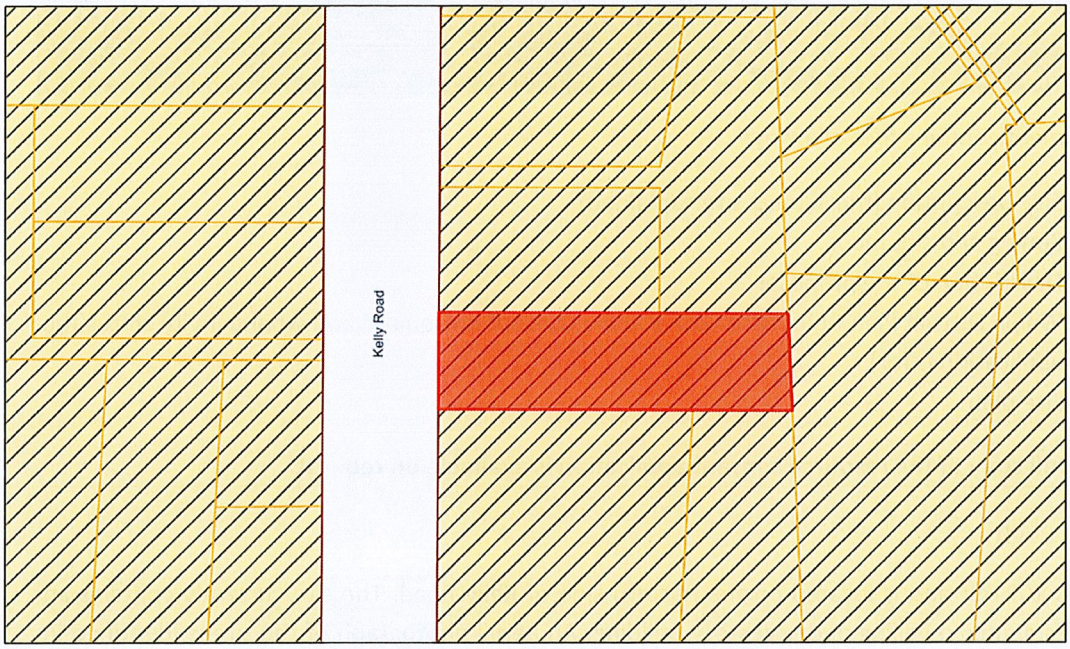


Figure 2: Waipa District Council Planning Maps indicating the Deferred Residential Zone

Proposal

The proposal is to demolish/remove the existing buildings on site to accommodate a six-unit double storied compact housing development, at the site located at 3 Kelly Road, Cambridge. The proposed site plans are identified in Figures 3 and 4 below.

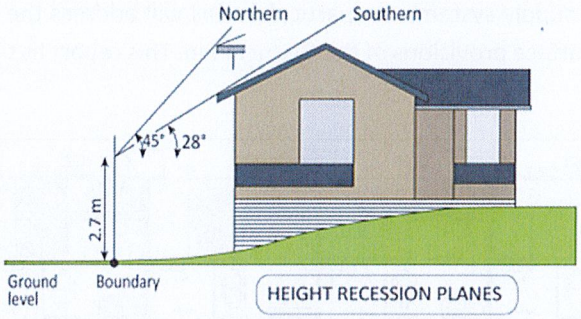
The total site coverage across the entire site equates to 43.7% (446m^2) and a permeable surface calculation of 25%. The intricacies of the development are outlined in the below table.

It is also the applicant's intention to undertake a unit title/free hold subdivision of the site to split the dwellings into individual ownership once the landuse component of the proposal has been approved (should that eventuate).

Each unit contains a single car internal garage (with on-site manoeuvring), a bathroom and an open plan kitchen living and dining area on the ground floor. The first floor contains three bedrooms (one with an ensuite), an office and a third bathroom. All outdoor living areas are north-facing at ground level, no upper floor balconies will be provided.

A new vehicle entrance off Kelly Road will provide access to all units via a shared accessway which traverses down the southern length of the site.

- **Rule 2.4.2.11** – Requires buildings to not penetrate through the height recession plane as detailed below. *The entire apartment building protrudes through the northern and southern recession planes (adjoining 1, 5, 7 and 9 Kelly Road).* ***Restricted Discretionary Activity.***



- **Rule 2.4.2.12** – Site Coverage must not exceed 40%. *The site coverage across the entire site equates to 43.7%.* ***Discretionary Activity.***

- **Rule 2.4.2.13** – Impermeable surfaces must not exceed 60% of the net site area (per site). *The total site impermeability is 75%.* ***Discretionary Activity.***

- **Rule 2.4.2.19** – Requires each unit to have an outdoor living area of at least 50m^2. *Each unit is provided with approximately 30m^2 outdoor living.* ***Restricted Discretionary Activity.***

- **Rule 2.4.2.44** – Requires compact housing developments to have a minimum net site area of 2,000m^2. *The site has an overall site area of 1,021m^2.* ***Discretionary Activity.***

Subdivision

As the subdivision fails to comply with the minimum lot size requirements specified in Rule 15.4.2.1, the subdivision is assessed as a **Non-Complying Activity.**

When packaged up, the development in its entirety will be assessed as a **Non-Complying Activity,** being the highest of the activity status referenced above.

A comprehensive assessment of the proposal against the relevant land use rules of the Waipa District Plan is available on request.

B&A

Three Waters

An engineered designed stormwater solution will be implemented to ensure any stormwater disposal is at pre-construction levels (more details on this can be provided on request). The site will connect to Council's reticulated wastewater and water supply systems. In particular, this will address the non-compliance associated with the permeable surface provisions of the District Plan. This report has been finalised and can be provided upon request.

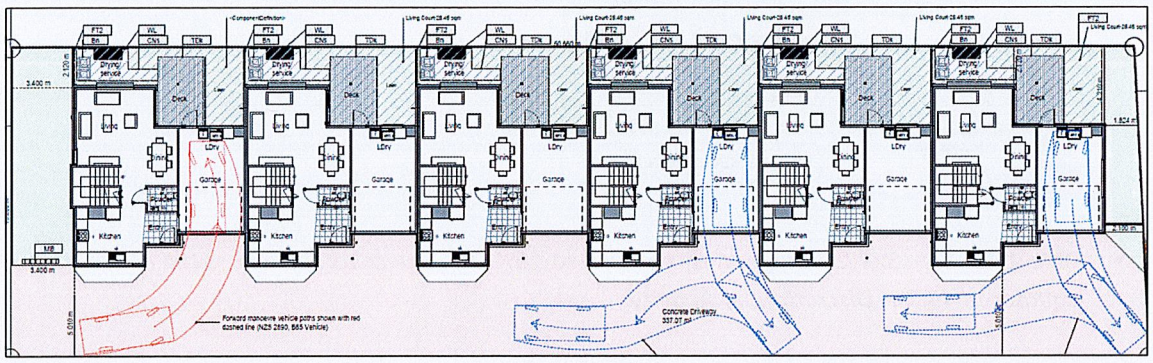


Figure 3: Ground floor plan

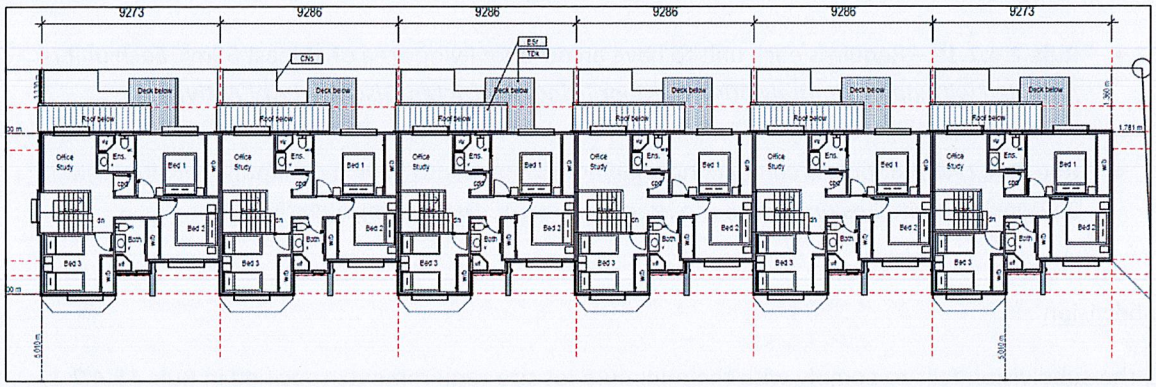


Figure 4: First floor plan

District Plan Rules Assessment

Landuse

Although the site falls within the 'Deferred Residential' Zone, we have assessed the proposal against the Residential Zone provisions of the District Plan to provide an accurate representation of how the development will be perceived in the surrounding, residential environment. However, when assessed against the Deferred Zone provisions, the proposal denotes a Non-Complying Activity Status. The landuse component of the development will generate the following non-compliances against the Residential Zone provisions:

- **Rule 2.4.2.1** – Requires buildings to be setback 4m from road boundaries. *Unit 1 is setback 3.4m from the road boundary.* ***Discretionary Activity.***

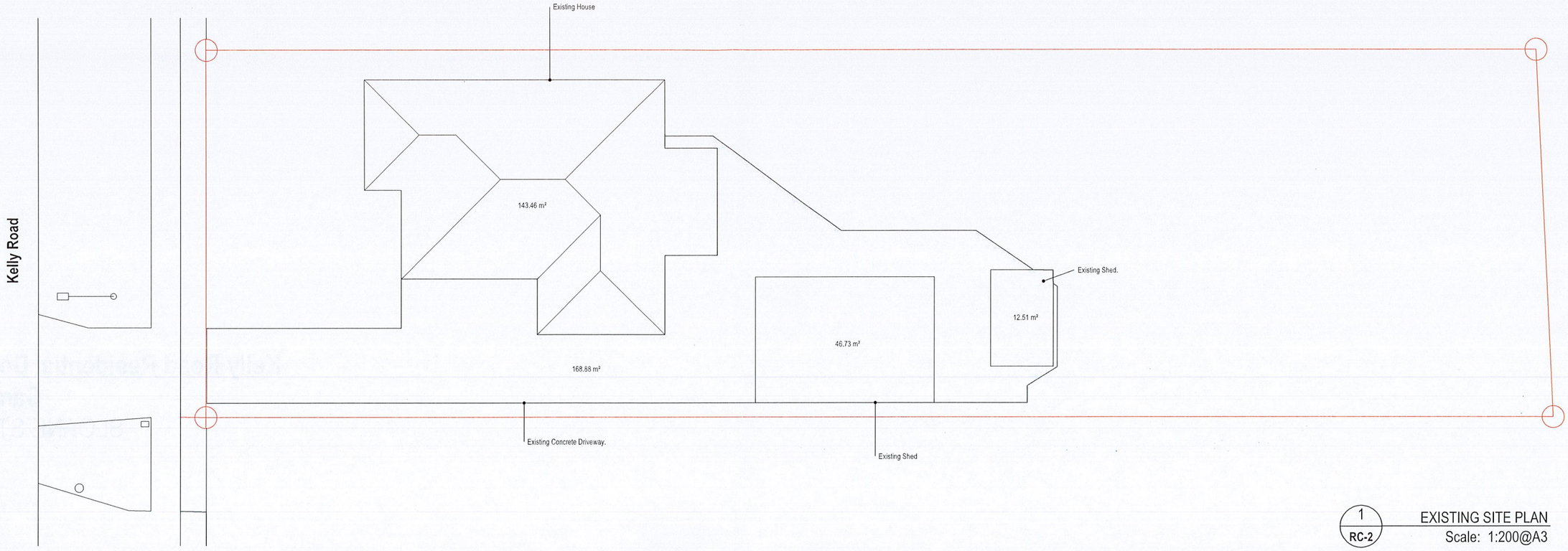
Resource Consent Drawings

Kelly Road Residential Development
Cambridge for
SLOANE STREET LTD

sekta ARCHITECTS



Monday, April 04, 2022	1	PRELIM.Resource Consent Issue FOR REVIEW	SC05	COVER PAGE	RC	RC-1



1 RC-2 EXISTING SITE PLAN
Scale: 1:200@A3

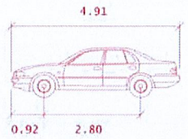
Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	April 4, 2022	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

Project No **22002**

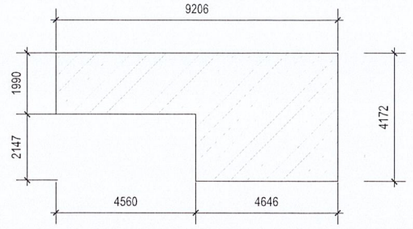
P +64 7 853 2204
F +64 7 853 2201
W www.sekta.co.nz
M PO Box 12029 Chartwell Ham.

Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Monday, April 04, 2022	1	PRELIM.Resource Consent Issue FOR REVIEW	SC05	EXISTING SITE PLAN	RC	RC-2

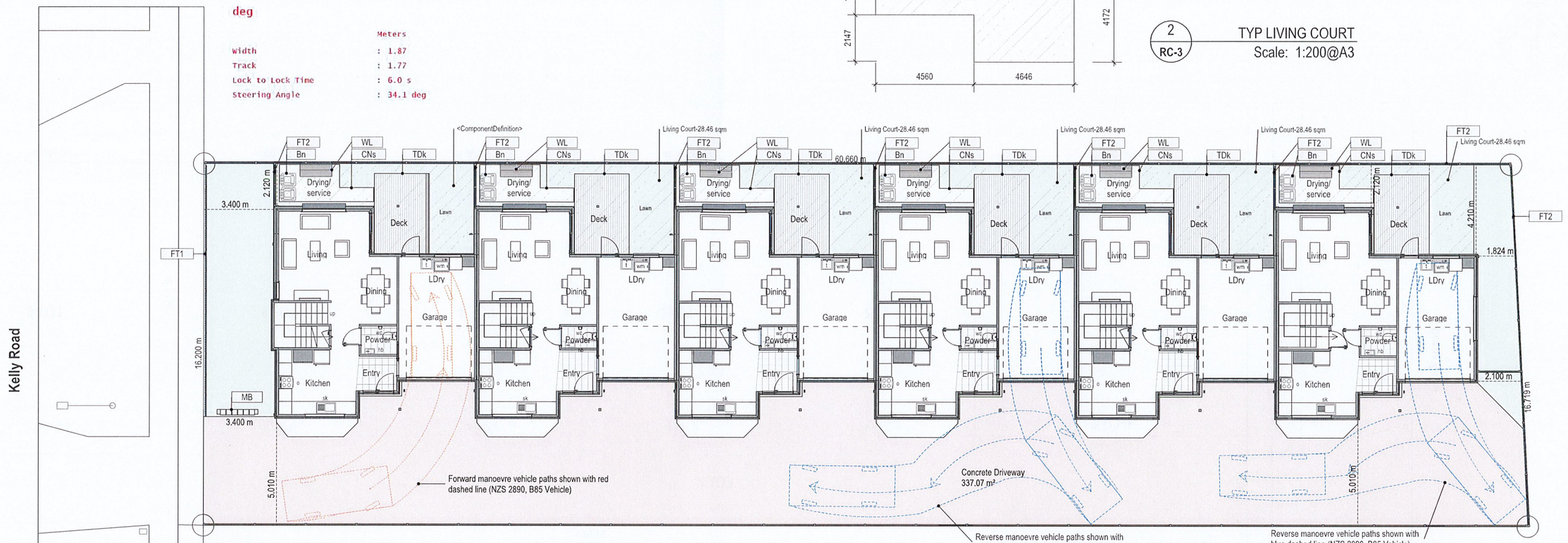


deg

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0 s
Steering Angle	: 34.1 deg



2 RC-3 TYP LIVING COURT
Scale: 1:200@A3



1 RC-3 SITE PLAN GL PLAN
Scale: 1:200@A3

General Notes-Site

Site Area	1019 sqm
Site Address	3 Kelly Road, Cambridge
Legal Description	LOT 5 Deposited Plan South Auckland 1176
EXISTING GFA ON SITE	
Existing House	144
Existing Sheds	58
Concrete Driveway	169
Total Existing GFA on Site	**371**
NEW BUILDING	
Unit 1	
GFA GL	73.12
GFA L1	64.32
Unit 2	
GFA GL	73.12
GFA L1	64.32
Unit 3	
GFA GL	73.12
GFA L1	64.32
Unit 4	
GFA GL	73.12
GFA L1	64.32
Unit 5	
GFA GL	73.12
GFA L1	64.32
Unit 6	
GFA GL	73.12
GFA L1	64.32
Total GFA	**824.64**
Territorial Authority	Waipa District Council
Wind Zone	Zone A
Earthquake Zone	Zone 1
Cliamte Zone	Zone 2
Exposure Zone	Zone B
Boundary Information	Survey and site info shown on architectural drawings is for information only.
Landscaping	Refer Landscaping Plan

Site Plan External Finishes.

LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

2 RC-3 SITE LOCALITY PLAN
Scale: 1:3500@A3

Project: PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	Client: SLOANE STREET LTD	Documentation: Documentation Date: April 4, 2022; Documentation Phase: Concept Design	Drawing Information: Approved: Stan K; Checked: SK; Dwg Scale: as shown; Drawn: SK	Project No: 22002			
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No	
Monday, April 04, 2022	1	PRELIM.Resource Consent Issue FOR REVIEW	SC05	PLAN SITE PLAN GL	RC	RC-3	

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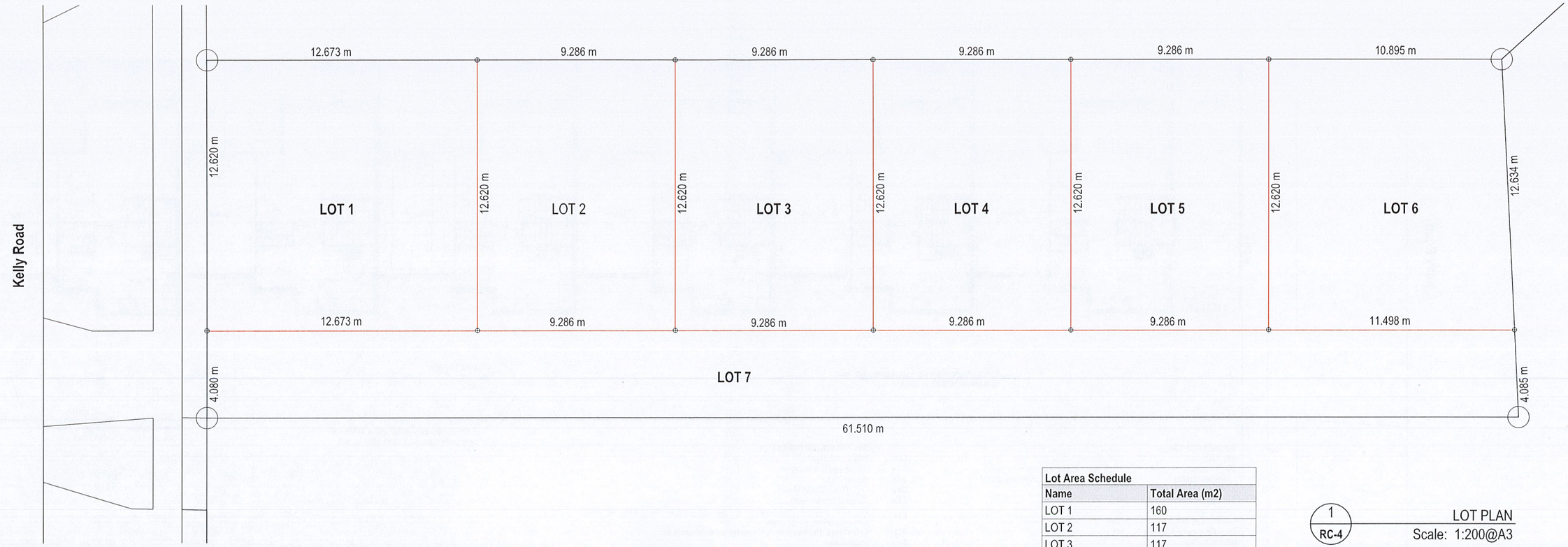

Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**

1 / RC-4 LOT PLAN
Scale: 1:200@A3

Project	Client
PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

Documentation		Drawing Information			
Documentation Date	April 4, 2022	Approved	Stan K	Checked	SK
Documentation Phase	Concept Design	Dwg Scale	as shown	Drawn	SK

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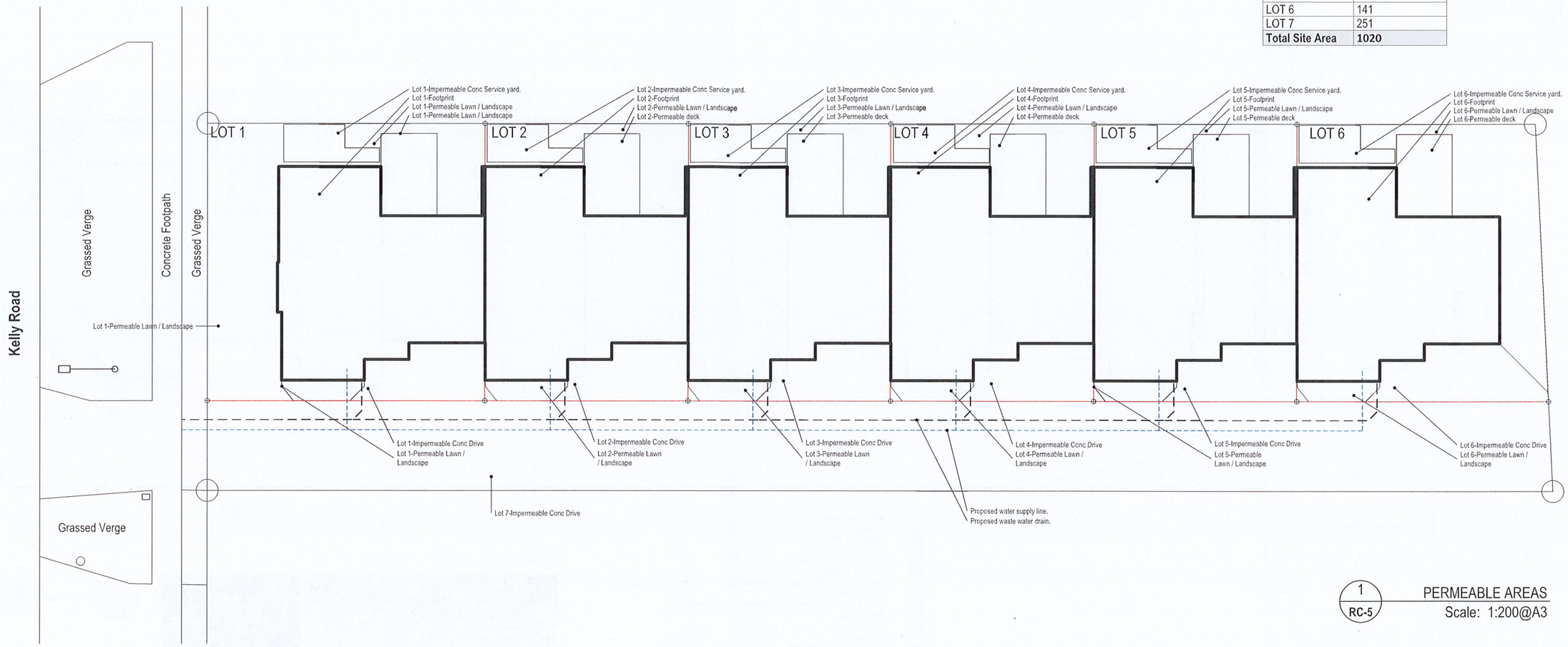
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Monday, April 04, 2022	1	PRELIM.Resource Consent Issue FOR REVIEW	SC05	LOT PLAN	RC	RC-4

Site Coverage at roof	
Total Site Area	1020
Total Area at roof	446.36
Site Cover	**43.76%**

Lot Area Schedule	
Name	**Total Area (m2)**
LOT 1	160
LOT 2	117
LOT 3	117
LOT 4	117
LOT 5	117
LOT 6	141
LOT 7	251
Total Site Area	**1020**



1 RC-5 PERMEABLE AREAS
Scale: 1:200@A3

Site Permeability Calculation														
Name	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**	**Name**	**Total Area (m2)**		**OA Site**
LOT 1		**LOT 2**		**LOT 3**		**LOT 4**		**LOT 5**		**LOT 6**		**LOT 7**			
Lot 1-Impermeable Conc Drive	13	Lot 2-Footprint	72	Lot 3-Footprint	72	Lot 4-Footprint	72	Lot 5-Footprint	72	Lot 6-Footprint	72	Lot 7-Impermeable Conc Drive	251		
Lot 1-Permeable Lawn / Landscape	3	Lot 2-Permeable deck	10	Lot 3-Permeable Lawn / Landscape	19	Lot 4-Permeable Lawn / Landscape	19	Lot 5-Permeable deck	10	Lot 6-Permeable deck	10				
Lot 1-Footprint	73	Lot 2-Permeable Lawn / Landscape	19	Lot 3-Permeable deck	10	Lot 4-Permeable deck	10	Lot 5-Impermeable Conc Drive	13	Lot 6-Permeable Lawn / Landscape	40				
Lot 1-Permeable Lawn / Landscape	61	Lot 2-Impermeable Conc Drive	13	Lot 3-Impermeable Conc Drive	13	Lot 4-Impermeable Conc Drive	13	Lot 5-Permeable Lawn / Landscape	3	Lot 6-Impermeable Conc Drive	16				
Lot 1-Permeable deck	10	Lot 2-Permeable Lawn / Landscape	3	Lot 3-Permeable Lawn / Landscape	3	Lot 4-Permeable Lawn / Landscape	3	Lot 5-Permeable Lawn / Landscape	19	Lot 6-Permeable Lawn / Landscape	3				
Total	**160**	**Total**	**117**	**Total**	**117**	**Total**	**117**	**Total**	**117**	**Total**	**141**			**Site Area**	**1020**
Total Permeable Area	74		32		32		32		32		53			Total Site Permeable Area	255
Total Non Permeable Area	86		85		85		85		85		88		251	Total Site Non Permeable Area	765
Permeable % of Lot	46.25%		27.35%		27.35%		27.35%		27.35%		37.58%			Permeable % of Total Site	25.00%
Non Permeable % of Lot	53.75%		72.64%		72.64%		72.64%		72.64%		62.41%			Non Permeable % of Total Site	75.00%

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Monday, April 04, 2022	1	PRELIM.Resource Consent Issue FOR REVIEW	SC05	PERMERABLE AREA CALCULATION	RC	RC-5

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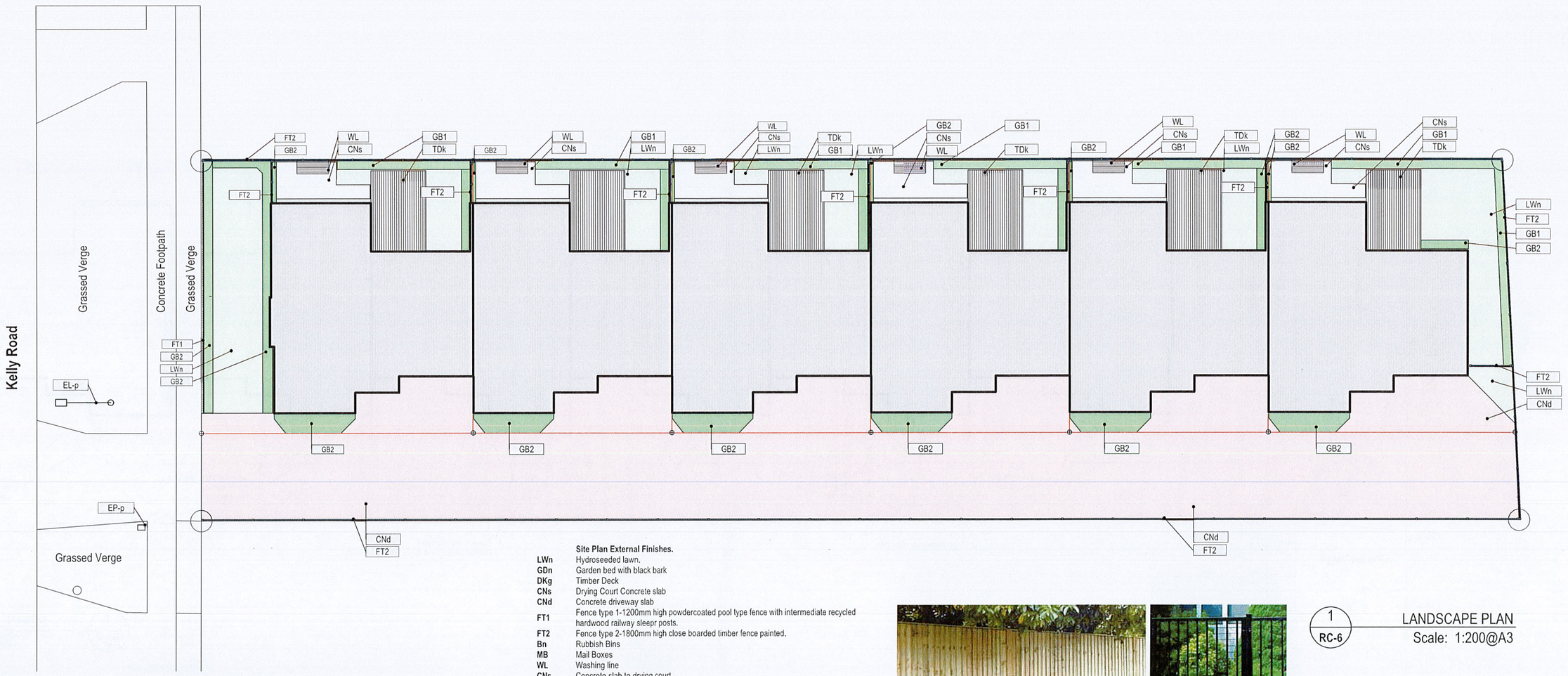


Site Plan External Finishes.

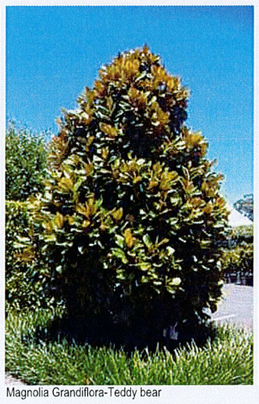
LWn	Hydroseeded lawn.
GDn	Garden bed with black bark
DKg	Timber Deck
CNs	Drying Court Concrete slab
CNd	Concrete driveway slab
FT1	Fence type 1-1200mm high powdercoated pool type fence with intermediate recycled hardwood railway sleepr posts.
FT2	Fence type 2-1800mm high close boarded timber fence painted.
Bn	Rubbish Bins
MB	Mail Boxes
WL	Washing line
CNs	Concrete slab to drying court
FSp	350sq concrete flagstone paver.
EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

FT1-1800h painted closed boarded fence

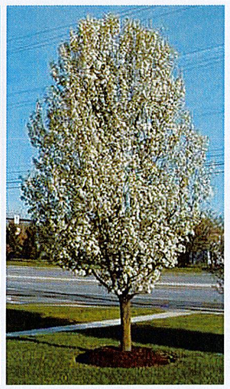
FT2-1200h Black powder coated pool type fence

1 / RC-6 LANDSCAPE PLAN
Scale: 1:200@A3

GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres



Magnolia Grandiflora-Teddy bear



Pyrus Calleryana-Ornamental Pear

GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

Phormium cookianum-Little Cracker

Phormium cookianum-Evening glow

Phormium cookianum-Emerald Gem

Black Mondo Grass

Project	PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	**Client**	SLOANE STREET LTD	**Documentation**		**Drawing Information**			
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Monday, April 04, 2022	1	PRELIM.Resource Consent Issue FOR REVIEW

Project No	SC REF	Drawing	Phase	Drawing No
22002	SC05	LANDSCAPE PLAN	RC	RC-6

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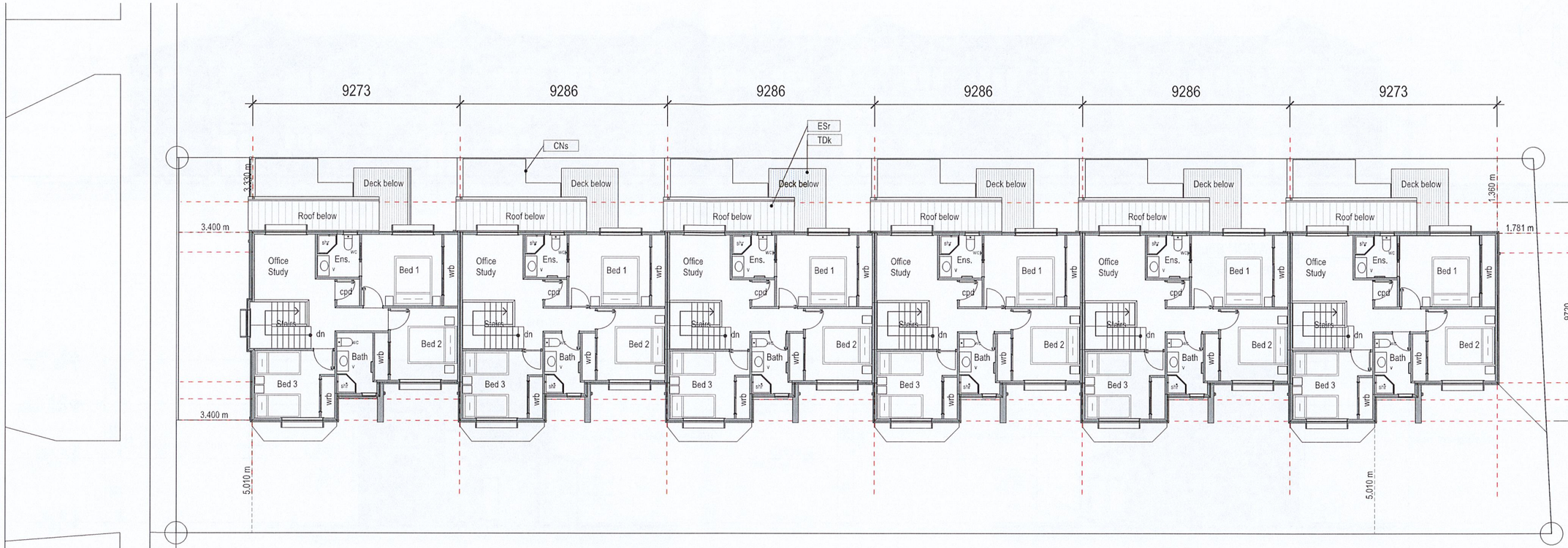

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EL-p	Existing Light Pole
EP-p	Existing Power Pole.
GB1	GB1-Hedging-Grisilinia littoralis over black bark bed at 500mm Centres
GB2	GB2-Native ground covers and flaxes.Mixture of Phormium cookianum-Little Cracker, Phormium cookianum-Evening glow, Phormium cookianum-Emerald Gem and Black Mondo Grass on black Bark.

1 / RC-7 PLAN L1

Scale: 1:200@A3

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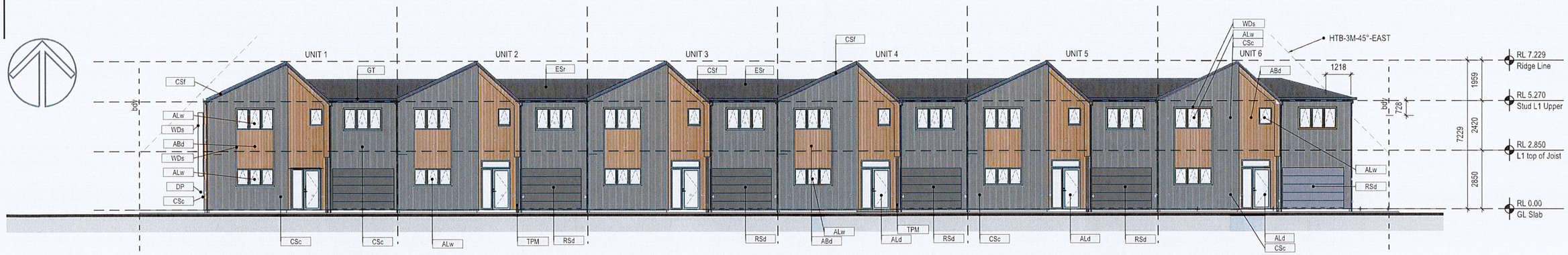
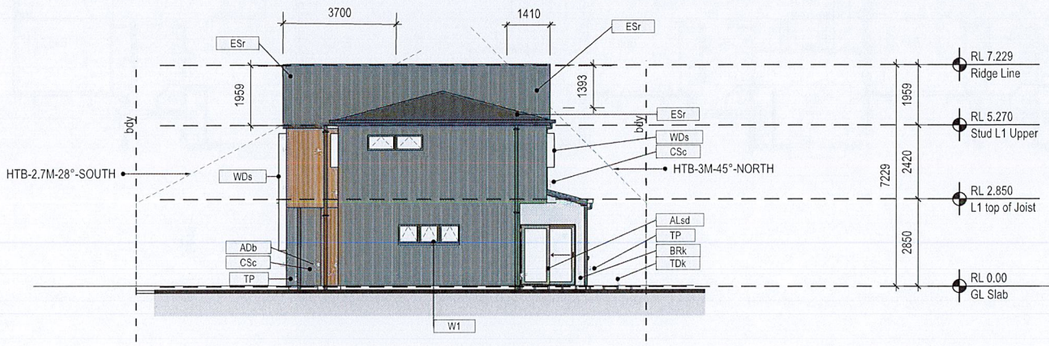
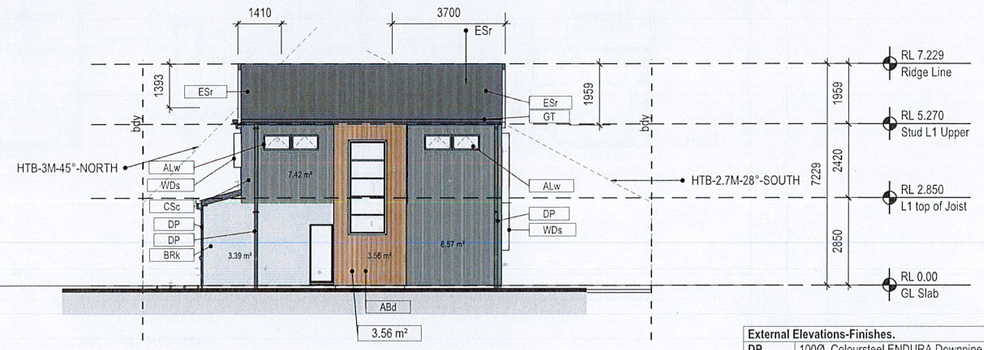
Date	Revision	Revision Description	SC REF	Drawing	Phase	Drawing No
Monday, April 04, 2022	1	PRELIM.Resource Consent Issue FOR REVIEW	SC05	PLAN L1	RC	RC-7



1 RC.8 ELEVATION South
Scale: 1:200@A3



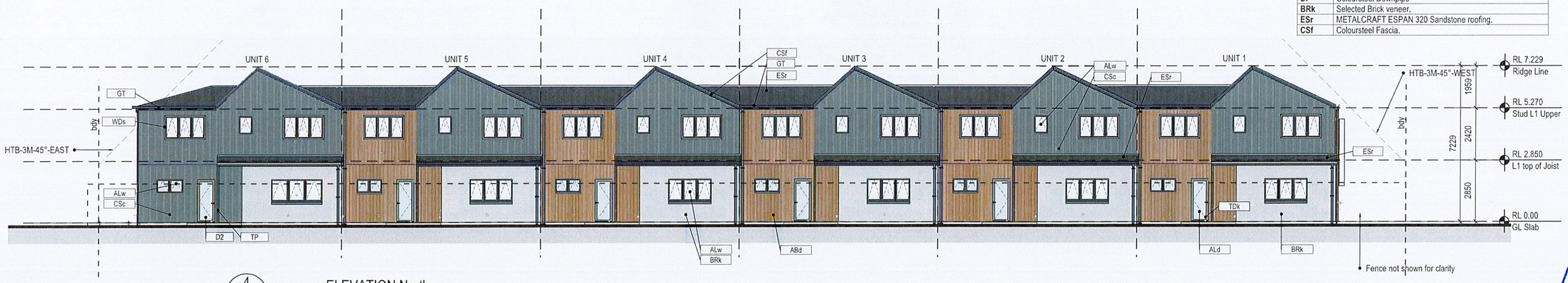
2 RC.8 ELEVATION East
Scale: 1:200@A3



3 RC.8 ELEVATION West
Scale: 1:200@A3

Percentage Glazing to Front façade.	
Ext Wall Area	22.94
Window Area	6.74
Window Area percentage of façade	**29.38%**

External Elevations-Finishes.	
DP	100Ø Coloursteel ENDURA Downpipe colour Grey Friars
CSc	METALCRAFT ESPAN 320 Sandstone wall cladding
ALw	Powdercoated Alum Windows
Ald	Powdercoated Glazed hinged door
Alsd	Powdercoated Alum Sliding Door.
ABd	ABODO Timber cladding
WDs	SPECTRUM Alumnium window shroud-powdercoated white
TP	Painted timber post
RSD	Powdercoated panel lift garage door.
TDk	Timber Deck
GT	Coloursteel Gutter
DP	Coloursteel Downpipe
BRk	Selected Brick veneer.
ESr	METALCRAFT ESPAN 320 Sandstone roofing.
CSf	Coloursteel Fascia.



4 RC.8 ELEVATION North
Scale: 1:200@A3

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PROPOSED MULTI RESIDENTIAL DEVELOPMENT 3 KELLY ROAD CAMBRIDGE	SLOANE STREET LTD

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Project No **22002**

SC REF	Drawing	Phase	Drawing No
SC05	ELEVATIONS	RC	RC-8

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